PUBLIC STREET, STORM SEWER AND STREET LIGHTING PLANS FOR PARAGON STAR DEVELOPMENT PARAGON PARKWAY

Sections 34-Township 48-Range 32
City of Lee's Summit
Jackson County, Missouri

Design Speed = 30 mph

Summary of Quantities

Item No.	Description	Unit	Approx. Unit Quantity
1	Concrete Sidewalk	SF	9,020
2	Concrete Brick Pavers	SF	10,418
3	Concrete Curb and Gutter (Type "B")	LF	1,881
4	Concrete Curb and Gutter (Type "C")	LF	112
5	Concrete Pavement (8" Depth)	SY	4,604
6	Fly Ash Modified Subgrade (9" Depth)	SY	5,022
7	Handicap Ramps	EA	17
8	6" Underdrain	LF	1,038
9	End Section 36" RCP w/ Conc. Toewall	EA	2
10	6'x4' Curb Inlet	EA	7
11	6'x5' Curb Inlet	EA	1
12	5'x4' Curb Inlet	EA	1
13	5'x5' Curb Inlet	EA	1
14	2" PVC Irrigation Sleeve	LF	640
15	Storm Sewer (15") (RCP)	LF	611
16	Storm Sewer (18") (RCP)	LF	629
17	Storm Sewer (24") (RCP)	LF	84
18	Storm Sewer (36") (RCP)	LF	178
19	Trench Drain (8")	LF	755
20	Grease Interceptor	EA	4
21	6" SDR 26 PVC	LF	427
22	4" SDR 26 PVC	LF	256
23	Riprap MODOT Type 3 Rock ditch liner	SY	129
24	Traffic-Bearing Concrete Backflow Preventer Vault	EA	1
25	Traffic-Bearing Concrete Meter Vault	EA	1
26	6" Class 305 PVC	LF	43
27	8" Class 305 PVC	LF	49
28	12"x12" Quazite Telecom Box	SF	3
29	Utility Concrete Pad	SF	240
30	12"x16" Quazite Electrical Box	EA	3
31	Utility Pull Box (30"x48") Pre-formed Polymer Conc. Handhole	EA	1
32	5" HDPE (Telecom Conduit)	LF	118
33	3" PVC (Telecom Conduit)	LF	55
34	2" PVC (Telecom Conduit)	LF	508
35	4" Gray PVC (NEC Approved Electrical Conduit)	LF	394
36	3" HDPE (Electrical Conduit)	LF	876
37	North American Green SC150BN	SY	251
38	Silt Fence	LF	3,703
39	Curb Inlet Protection	EA	10
40	Final Seeding	ACRE	0.41
41	Street Lighting		
42	Traffic Signs		

PROJECT BENCHMARK

BM #11 – Chiseled "L" on top
Northeast corner of concrete guardrail
at the Northeast corner of I470 bridge
spanning View High Drive.
EL=833.80

UTILITY CONTACTS

Sanitary Sewers
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Missouri Gas Energy
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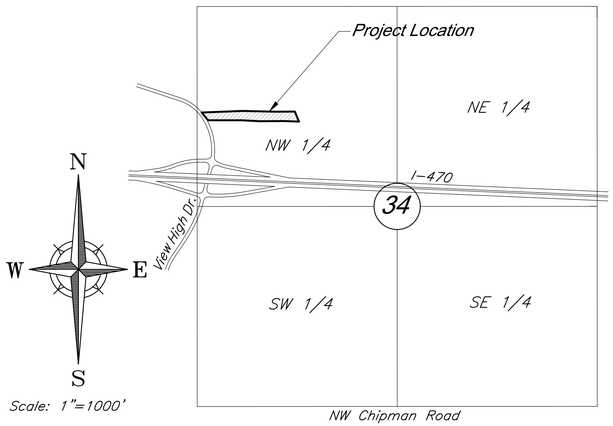

Scale: 1"=1000'

VICINITY MAP

Section 34-T48N-R32W

INDEX OF SHEETS

DEVELOPED AND OWNED BY:
PARAGON STAR LLC
801 NORTHWEST COMMERCE CENTER
LEE'S SUMMIT, MISSOURI 64086
PHONE: (816) 802-6801
CONTACT: Mr. Flip Short
EMAIL: fshort@legacytouch.com

PREPARED & SUBMITTED BY:
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LENEXA, KANSAS 66219
PHONE: 913-492-0400
FAX: 913-577-8312
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EMAIL: BBURTON@GBATEAM.COM

STATE OF MISSOURI
CLINT LOUMASTER
NUMBER PE-2011009651
11/4/2020
REGISTERED PROFESSIONAL ENGINEER

CLINT LOUMASTER
PROJECT ENGINEER:

APPROVED:

CITY ENGINEER:

11/4/20
DATE:

DATE:

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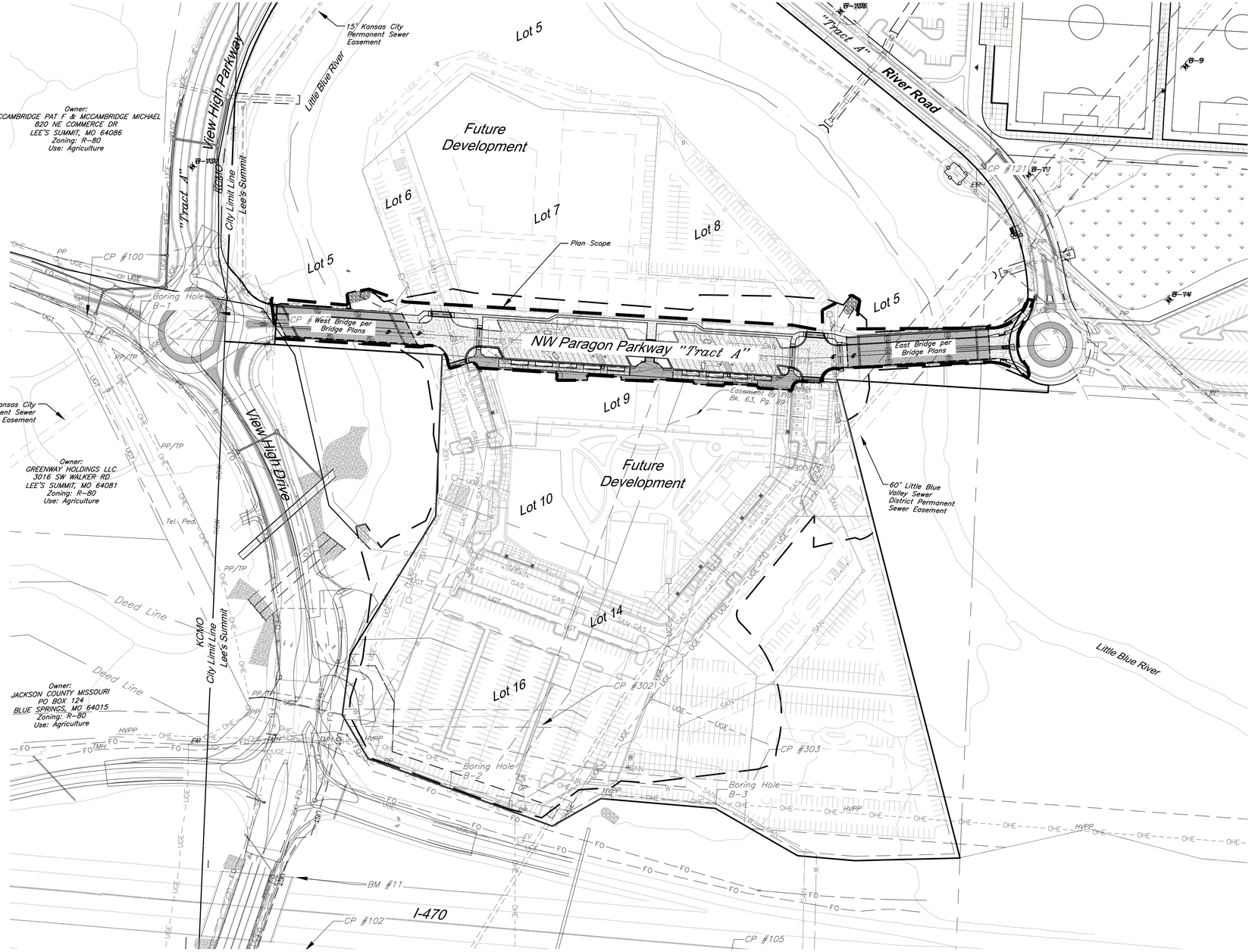

PROJECT CONTROL

Modified State Plane (Project Ground Coordinates), NAD83
2403 – Missouri West, U.S. Feet
Vertical – NAVD88, U.S. Feet

0.99990648
To get to State Plane:
Coordinates x CAF = State Plane

CP #100 – ½" rebar with GBA cap on South side of View High Drive, 18' West of asphalt field entrance, approximately 975' North along the centerline of View High Drive from the ramp to West bound I-470.
Coordinates:
N: 1009568.88'
E: 2803498.54'
EL: 819.37'
Ties:
1) North 4.15' to the South edge of asphalt of View High Drive
2) East 18.00' to West edge of asphalt field entrance
South 27.50' to west end of 18" cmp culvert for field entrance

CP #120 – ½" rebar with GBA cap at NW corner of View High Drive and access road "Future View High Drive Pkwy"
Coordinates:
N: 1009573.66'
E: 2803729.57'
EL: 811.46'
Ties:
1) NW 3.60' to East edge of asphalt
2) West 51.44' to back of curb at nose of island
NE 56.30' to center of MH lid

CP #121 – ½" rebar with GBA cap approximately 14.30'± ENE of access road "Future View High Drive Pkwy" from View High Drive, near MH #1055
Coordinates:
N: 1009788.28'
E: 2805047.90'
EL: 806.65'
Ties:
1) SW 3.65' to center of MH lid
2) WNW 14'± to power pole
3) NW 35.65' to NE corner of chain link fence area

CP #122 – ½" rebar with GBA cap approximately 13.80'± NE of access road "Future View High Drive Pkwy" from View High Drive
Coordinates:
N: 1010126.48'
E: 2804884.88'
EL: 813.20'
Ties:
1) West 298'± to center of MH lid
2) South 199'± to center of MH lid

CP #304 – ½" rebar West of future View High Pkwy at top of hill near tree line, approximately 7.32'± North of access road "Future View High Drive Pkwy" from View High Drive
Coordinates:
N: 1010251.92'
E: 2803699.53'
EL: 839.39'
Ties:
1) NNE 23.10' to South face of twin 10" oak tree
2) SW 5.30' to East face of 10" oak tree
3) NW 14.60' to East face of 9" oak tree

CP #305 – ½" rebar South of dead end of gravel driveway, which connects to Easterly end of E. 97th Street, on top of hill.
Coordinates:
N: 1010784.43'
E: 2804698.47'
EL: 888.55'
Ties:
SE 4.00' to great break at ridge line

PROJECT BENCHMARK

BM #11 – Chiseled "L" on top Northeast corner of concrete guardrail at the Northeast corner of I-470 bridge spanning View High Drive.
EL=833.80

STATE OF MISSOURI
CLINT LOUMASTER
NUMBER PE-2011009651
11/4/2020
REGISTERED PROFESSIONAL ENGINEER

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DATE:	11-4-2020
DESIGN BY:	CEL
DRAWN BY:	DRV
PROJECT NO.:	12720
SHEET NO.:	2
TOTAL SHEETS	51

Clint Loumaster
Professional Engineer
License No. PE2011-009651

Street and Storm Sewer Plans
Paragon Parkway
Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing 10/16/2020		

Legend

- Power Pole
- Guy Anchor
- Electric Meter
- Electrical Transformer
- Electric Pedestal
- Power Pole/Telephone Pole
- Power Pole/Light Pole
- Gas Meter
- Gas Valve
- Curb Inlet
- Junction Box
- Sanitary Sewer Manhole
- Light Pole
- Boring Hole
- Sign
- Property Corner
- Telephone Manhole
- Telephone Pedestal
- Telephone Pole
- Proposed Building
- Barbed Wire Fence
- Centerline
- Fiber Optic Line
- Gas Line
- Guard Rail
- Over Head Electric
- Over Head Telephone
- Property Line
- Right-of-Way Line
- Sanitary Sewer Line
- Stream
- Tree Line
- Underground Electric
- Underground Telephone
- Underground Cable TV
- Water Line
- Proposed Grades
- Proposed Storm Sewers
- Existing Grades
- Existing Storm Sewers
- Tree Deciduous
- Fire Hydrant
- Water Meter

FLOODPLAIN NOTE:

According to FEMA Flood Insurance Rate Map (FIRM) Community Panel No. 29095C0404G, effective Date 1/20/17, the tract lies partially within an area designated as Special Flood Hazard Areas. Special Flood Hazard Areas defined on portions of the site include regulatory floodway, Zone AE (with depths identified on site from 810 to 811), and 0.2% Annual Chance Flood Hazard Areas.

A CLOMR has been provided for this project, case number 20-07-0520R, received 2/14/20.

Total Disturbed Area = 2.76 Acres

100' 0' 100' 200'
SCALE : 1 INCH = 100 FEET

General Layout

STATE OF MISSOURI
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DESIGN BY:	CEL
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SHEET NO.	3
TOTAL SHEETS	51

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Street and Storm Sewer Plans

Paragon Parkway

Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing 10/16/2020		

General Notes:

1. All Construction shall conform to the current City Standards and Specifications of Lee's Summit, MO in effect at the time of the City's approval date shown on the approved plans and incorporated herein by reference.
2. All traffic control shall be the responsibility of the Contractor and shall be in conformance with the Manual of Uniform Traffic Control Devices (MUTCD).
3. Property Corners and/or Section corners disturbed or damaged by construction activities shall be reset by a Registered Land Surveyor licensed in the state of Missouri, at the Contractor's expense.
4. The Contractor shall be responsible for the restoration of the Right-of-Way and for damaged improvements such as curbs, driveways, sidewalks, street light and traffic signal junction boxes, traffic signal equipment, irrigation systems, etc. Damaged improvements shall be repaired in conformance with the latest Lee's Summit, MO standards and to the City's satisfaction.
5. All work shall be confined within easements and/or construction limits as shown on the plans.
6. The Contractor shall, prior to the commencement of work, investigate surface and subsurface conditions to be encountered across the site and notify the Engineer if any discrepancies or changed conditions are noted.
7. This project will include numerous activities occurring on site including storm sewer, sanitary sewer, grading, utility etc. Contractor shall coordinate his work with other contractors on site.
8. All trash and debris identified on site shall be properly handled and disposed of in accordance with state of Missouri regulations.
9. All measurements on these plans are horizontal distances, not slope distances.
10. Items not listed separately in the Summary of Quantities are subsidiary to other items.
11. All site concrete shall be KCMMB – 4,000 PSI unless otherwise noted.
12. All paving shall adhere to Lee's Summit Standards, Section 2200.

Permitting:

13. Excavation for Utility work within the Right of Way requires a Right of Way work permit from the Public Works Department, in addition to all other permits.
14. Contractor is responsible for obtaining all required permits, paying all fees, and for otherwise complying with all applicable regulations governing the work.
15. No work shall be completed within the existing floodway until the CLOMR has been issued.
16. No work shall be completed within the delineated wetland or regulatory stream channels until the U.S. Corps of Engineers Section 404 permit is issued. All work shall adhere to the terms and conditions of this permit.

Erosion Control:

17. The Contractor is responsible for providing erosion and sediment control BMP's to prevent sediment from reaching paved areas, storm sewer systems, drainage courses, and adjacent properties. In the event the prevention measures are not effective, the contractor shall remove any debris, silt, or mud and restore the Right-Of-Way, or adjacent properties to original or better condition.
18. Contractor shall ensure that all construction shall conform to the requirements of the Stormwater Pollution Prevention Plan (SWPPP) a copy of which shall be maintained and updated on site by the Contractor.
19. The Contractor shall seed all disturbed areas within the Public Street Right-of-Way unless otherwise noted in the plans.
20. No trees shall be damaged or removed without prior authorization from owner unless otherwise shown on this plan.
21. Inspection and maintenance of the sediment and erosion control BMPs shall be per the project SWPPP, but at a minimum shall be once every 7 days or within 24 hours of a precipitation event of 0.5 inches or greater. Records of inspections shall be kept with the project SWPPP.
22. Trees, where indicated to be removed, shall be completely removed, including root balls.
23. At the contractors option, removed trees may be mulched on site and used as mulch berms in lieu of sediment fence or straw wattles.

Earthwork:

24. The Contractor shall be responsible for removing and disposing of grass and vegetation that is found on site. Contractor shall strip site of organic material to a depth acceptable to the Geotechnical Engineer and prior to the placement of fill. Disposal of all debris shall be performed by the contractor in strict accordance with all applicable codes and ordinances. All clearing and grubbing, stripping, and grading operations shall be performed in accordance with the recommendations as found in the Geotechnical Report, and erosion control and grading plans for this site.
25. Slopes shall be constructed to a maximum slope of 3:1 (Horiz:Vert).
26. Refer to "Geotechnical Engineering Report: Paragon Star – Soccer Fields" by Terracon Consultants, Inc., dated 6/27/2016 (Terracon Project #02165149) for grading and pavement recommendations and boring logs. All earthwork shall conform to the recommendations of the Report. A copy of the final site soils report and all boring logs will be available for review prior to the commencement of construction. The soils information shown in this set of plans has been provided by Terracon. George Butler Associates, Inc. is not responsible for the adequacy or accuracy of the soils information shown or provided.
27. Unless otherwise noted, all spot elevations and contours are shown to "finish" grade surface. Contractor shall adjust for any overcut required in paving, parking, landscape, or building pad areas as defined in the Geotechnical Report, these plans, or the project specifications.
28. All temporary slopes and excavations should conform to Occupational Safety and Health Administration (OSHA) standards for the Construction Industry (29 CFR part 1026, subpart P).
29. Cut/Fill – All fills are to be made with suitable structural fill material in accordance with the project's geotechnical report recommendations.

Utility:

30. All Manholes, Catch Basins, Utility Valves, Meter Pits, and other utility equipment shall be adjusted or rebuilt to grade as required.
31. Prior to beginning work, the Contractor shall notify all utility companies who have facilities in the vicinity of the project area of the work to be performed.
32. All Utility extensions and construction shall conform to the Standards and Specifications of the applicable Utility Companies.

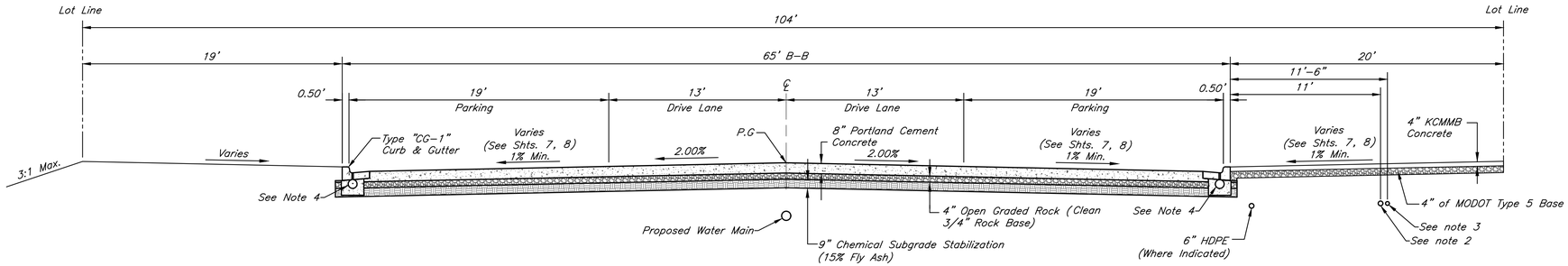
Storm Sewer:

33. All RCP shall be Class III.
34. All HDPE Pipe shall be ADS N-12. Pipe shall meet AASHTO M294.
35. Pipe Lengths are called out from center of structure to center of structure.
36. Drainage across the project site during construction shall be the Contractor's responsibility. Surface drainage shall be controlled to reduce or prevent the flow of surface water onto adjacent grounds. Contractor shall control downstream erosion and silting during construction. Flexibility is given to to the Contractor to make minor grading revisions along roads or between building pads to improve drainage during construction, with prior approval of the engineer.
37. Prior to ordering precast storm sewer structures, Contractor shall provide shop drawings to the Engineer for review and approval.

General Notes

NOTES:

1. All paving shall adhere to Lee's Summit Standards, Section 2200.
2. Install 3" Dia. HDPE electrical conduit as shown on Sheet 15. Minimum 24" Depth from final grade to top of conduit with buried electrical line plastic caution tape at a depth of 12" per utility standards.
3. Install 2" Dia. PVC telecom conduit as shown on Sheet 15. Minimum 24" depth from final grade to top of conduit.
4. Install 8" Duraslot Trench Drain as shown on Sheets 15 and 25.



TYPICAL SECTION - PARAGON PARKWAY

Scale: 1" = 5'

STATE OF MISSOURI
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NUMBER PE-2011009651
11/4/2020
REGISTERED PROFESSIONAL ENGINEER

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PROJECT NO.:	12720
SHEET NO.	4
TOTAL SHEETS	51

Clint Loumaster
Professional Engineer
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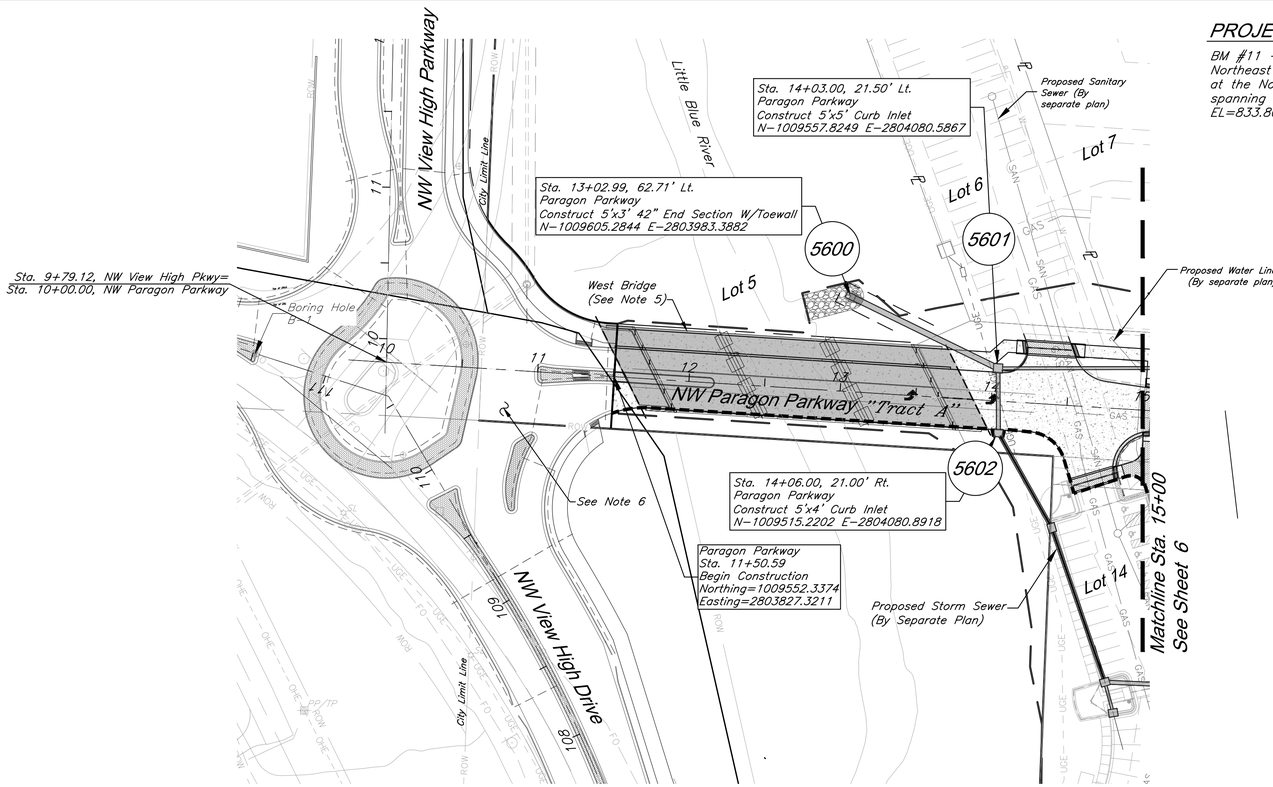
Street and Storm Sewer Plans

Paragon Parkway

Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing 10/16/2020		



PROJECT BENCHMARK

BM #11 – Chiseled "L" on top Northeast corner of concrete guardrail at the Northeast corner of 1470 bridge spanning View High Drive.
EL=833.80

STATE OF MISSOURI
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11/4/2020
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DATE:	11-4-2020
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DRAWN BY:	DRV/DGL
PROJECT NO.:	12720
SHEET NO.	5
TOTAL SHEETS	51

Clint Loumaster
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Street and Storm Sewer Plans

Paragon Parkway

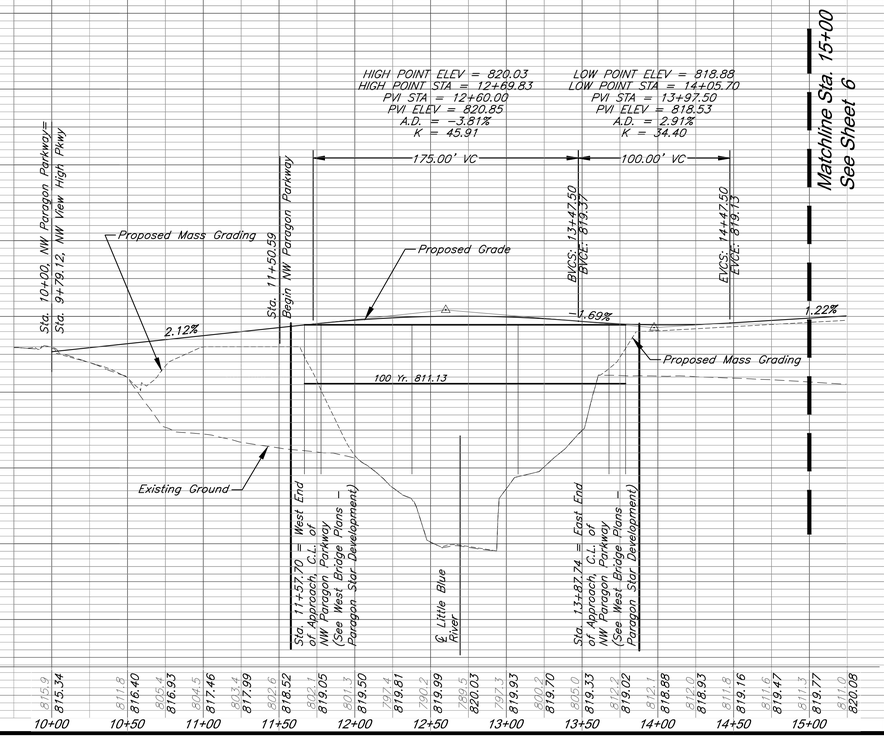
Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing 10/16/2020		

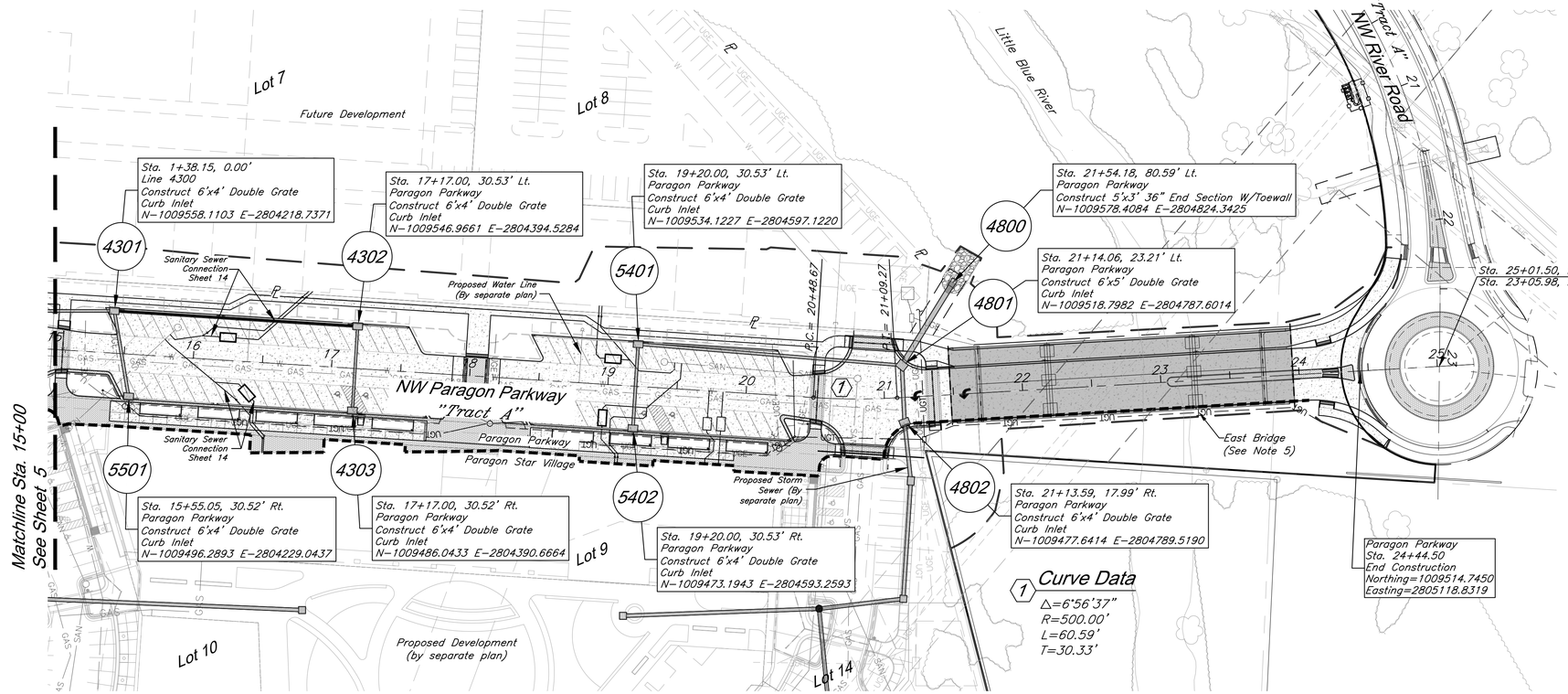
Notes:

1. Pipe length called out is from center of structure to center of structure.
2. Storm Sewer Structure Station offset and coordinates based on center of structure. Top elevations are top center of lid.
3. Tops on all in grade inlets shall maintain street slope, low point inlets to be set level.
4. Boring information based on original undisturbed earth – see Geotechnical report.
5. Sta. 11+57.78 – Sta. 13+87.74 See West Bridge Plans, Paragon Star Development.
6. NW View High Parkway – See Street and Storm Sewer Plans, Paragon Star Development.

Horizontal Scale: 1" = 50'
Vertical Scale: 1" = 10'



Plan and Profile



Legend

Paragon Parkway
Paragon Star Village

Construction Line for Paragon Parkway and Paragon Star Village

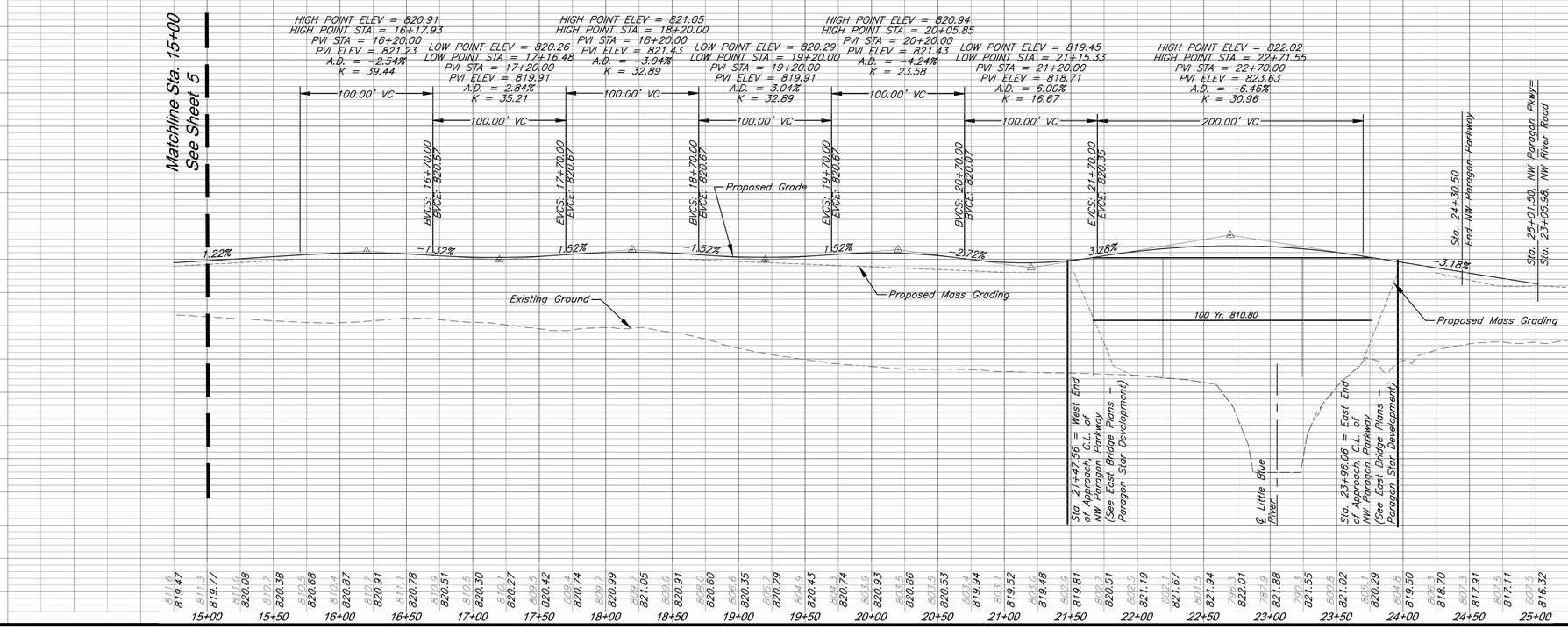
Horizontal Scale: 1" = 50'
Vertical Scale: 1" = 10'

PROJECT BENCHMARK

BM #11 – Chiseled "L" on top Northeast corner of concrete guardrail at the Northeast corner of I470 bridge spanning View High Drive.
EL=833.80

Notes:

1. Pipe length called out is from center of structure to center of structure.
2. Storm Sewer Structure Station offset and coordinates based on center of structure. Top elevations are top center of lid.
3. Tops on all in grade inlets shall maintain street slope, low point inlets to be set level.
4. Boring information based on original undisturbed earth – see Geotechnical report.
5. Sta. 21+47.56 – Sta. 23+96.06 See East Bridge Plans, Paragon Star Development



Plan and Profile

STATE OF MISSOURI
CLINT LOUMASTER
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DRAWN BY:	DRV/DGL
PROJECT NO.:	12720
SHEET NO.:	6
TOTAL SHEETS	51

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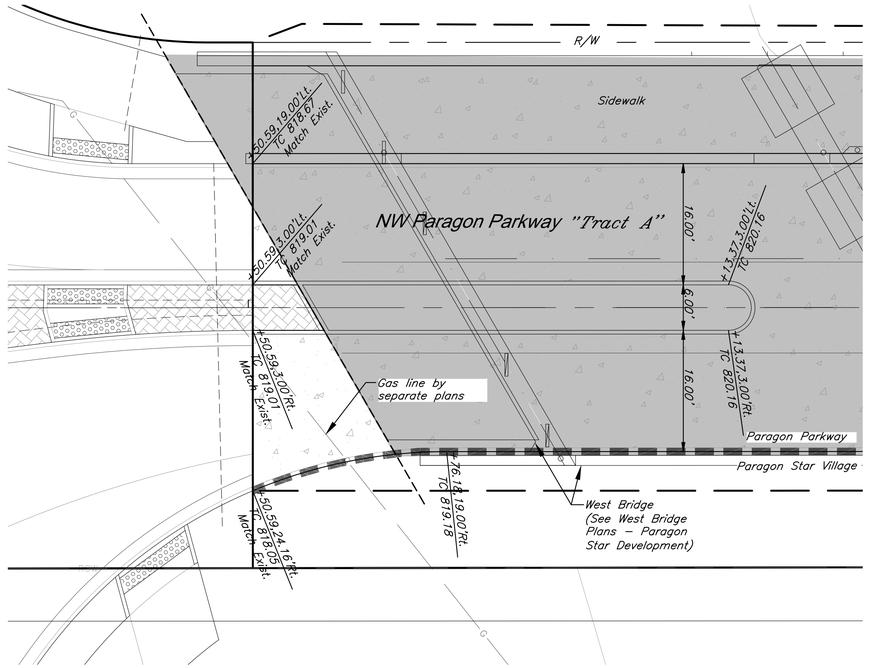
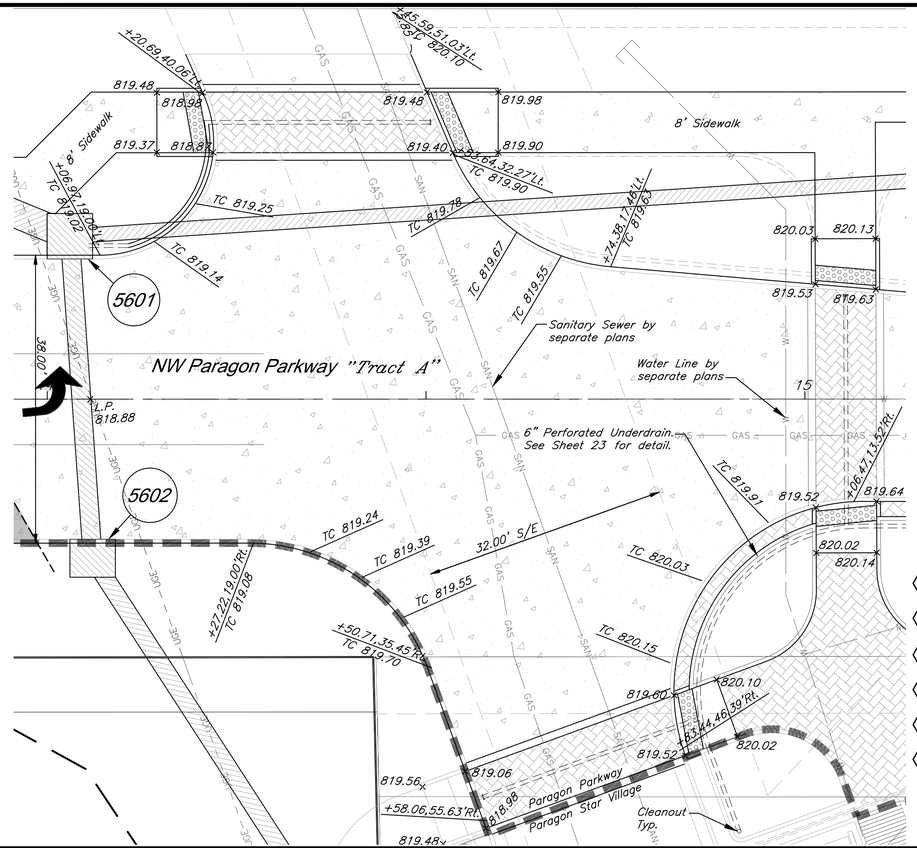
Street and Storm Sewer Plans

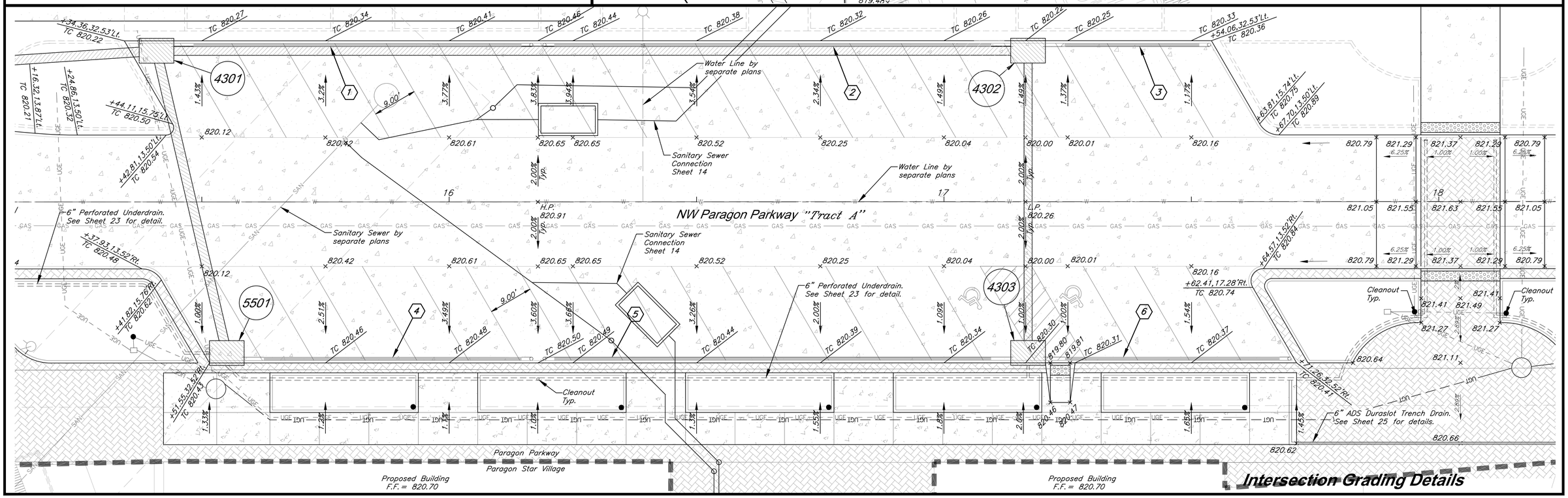
Paragon Parkway

Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing 10/16/2020		







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DATE:	11-4-2020
DESIGN BY:	CEL
DRAWN BY:	DRV/DGL
PROJECT NO.:	12720
SHEET NO.	7
TOTAL SHEETS	51

Street and Storm Sewer Plans

Paragon Parkway

Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing 10/16/2020		

Legend:

- Proposed Storm Sewer
- 6" HDPE Underdrain
- Underground Electrical Duct Bank
- W — Water Line (By Separate Plan)
- SAN — Sanitary Sewer (By Separate Plan)
- Flow Arrow
- 8" ADS Duraslot Trench Drain
- Paragon Parkway / Paragon Star Village — Construction Line for Paragon Parkway and Paragon Star Village

NOTE:

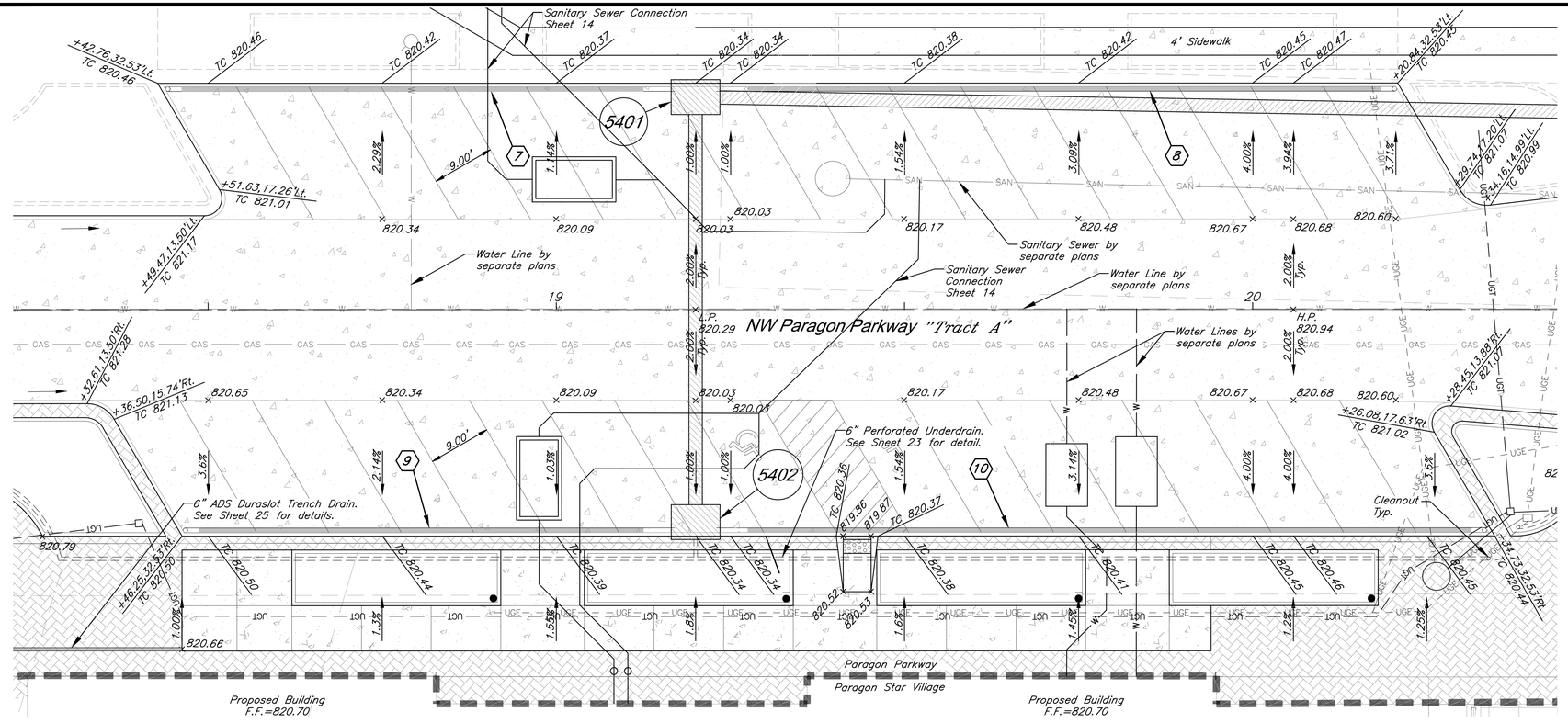
1. See Sheets 9 and 10 for ADA Ramp Enlargements

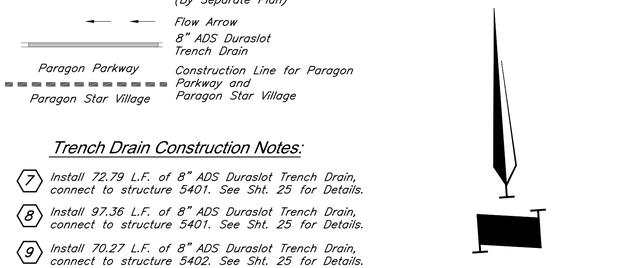
Trench Drain Construction Notes:

1. Install 72.74 L.F. of 8" ADS Duraslot Trench Drain, connect to structure 4301. See Sht. 25 for Details.
2. Install 94.74 L.F. of 8" ADS Duraslot Trench Drain, connect to structure 4302. See Sht. 25 for Details.
3. Install 33.58 L.F. of 8" ADS Duraslot Trench Drain, connect to structure 4302. See Sht. 25 for Details.
4. Install 58.54 L.F. of 8" ADS Duraslot Trench Drain, connect to structure 5501. See Sht. 25 for Details.
5. Install 94.73 L.F. of 8" ADS Duraslot Trench Drain, connect to structure 4303. See Sht. 25 for Details.
6. Install 49.81 L.F. of 8" ADS Duraslot Trench Drain, connect to structure 4303. See Sht. 25 for Details.

10' 0' 10' 20'
SCALE : 1 INCH = 10 FEET

Intersection Grading Details





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11/4/2020
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DATE:	11-4-2020
DESIGN BY:	CEL
DRAWN BY:	DRV/DGL
PROJECT NO.:	12720
SHEET NO.:	8
TOTAL SHEETS	51

Clint Loumaster
Professional Engineer
License No. PE2011-009651

Street and Storm Sewer Plans

Paragon Parkway

Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing 10/16/2020		

Legend:

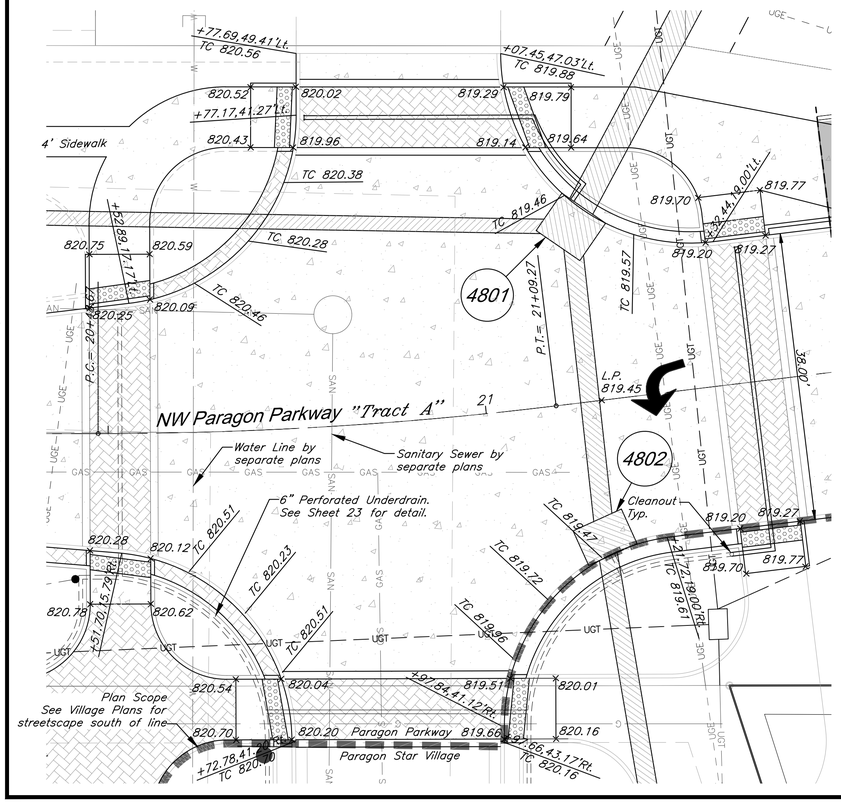
- Proposed Storm Sewer
- 6" HDPE Underdrain
- Underground Electrical Duct Bank
- W — Water Line (By Separate Plan)
- SAN — Sanitary Sewer (By Separate Plan)
- Flow Arrow
- 8" ADS Duraslot Trench Drain
- Paragon Parkway / Paragon Star Village — Construction Line for Paragon Parkway and Paragon Star Village

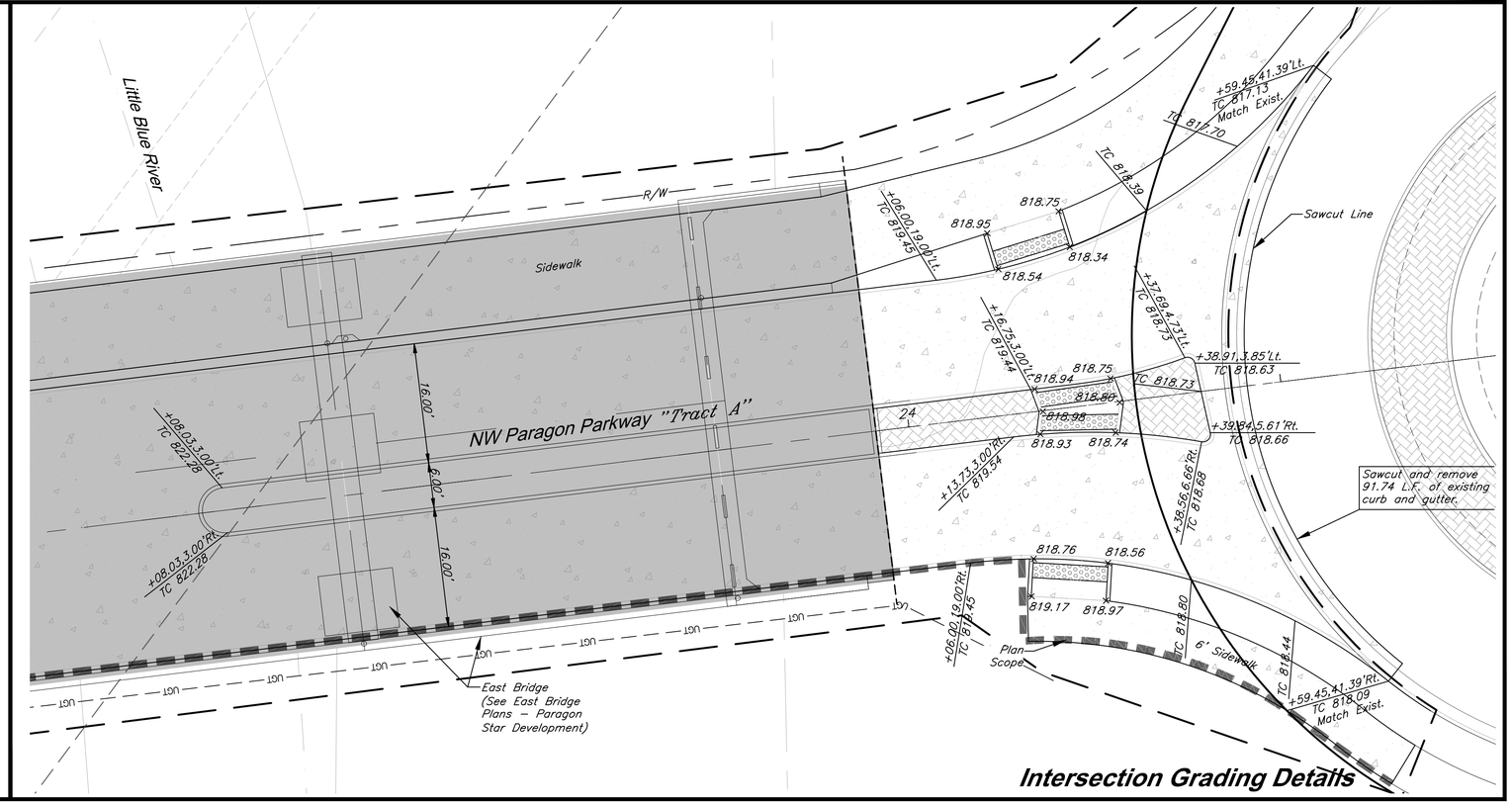
NOTE:

1. See Sheets 9 and 10 for ADA Ramp Enlargements

Trench Drain Construction Notes:

7. Install 72.79 L.F. of 8" ADS Duraslot Trench Drain, connect to structure 5401. See Sht. 25 for Details.
8. Install 97.36 L.F. of 8" ADS Duraslot Trench Drain, connect to structure 5401. See Sht. 25 for Details.
9. Install 70.27 L.F. of 8" ADS Duraslot Trench Drain, connect to structure 5402. See Sht. 25 for Details.
10. Install 110.28 L.F. of 8" ADS Duraslot Trench Drain, connect to structure 5402. See Sht. 25 for Details.





Intersection Grading Details

STATE OF MISSOURI
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Street and Storm Sewer Plans
Paragon Parkway
Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
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LEGEND

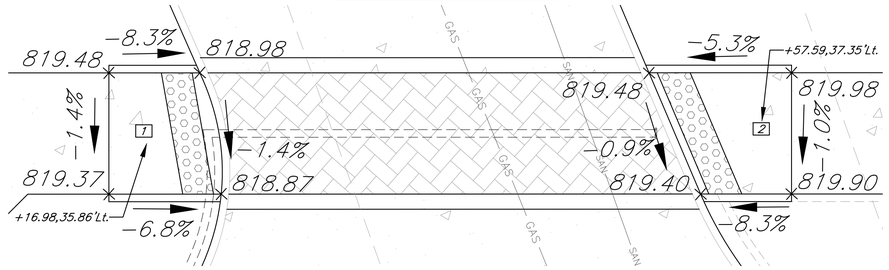
R/W Right of Way
TC Top of Curb
[1] Ramp ID See sheet 19 for details

NOTE:

1. All Elevations are to Top of Curb unless otherwise noted.
2. See Sheet 19 for Curb & Gutter Detail.
3. See Sheet 20 for Sidewalk Ramp Details.
4. Install Type "A" S/W Ramp unless otherwise noted.

5' 0' 5' 10'
SCALE : 1 INCH = 5 FEET

PARAGON PKWY - West



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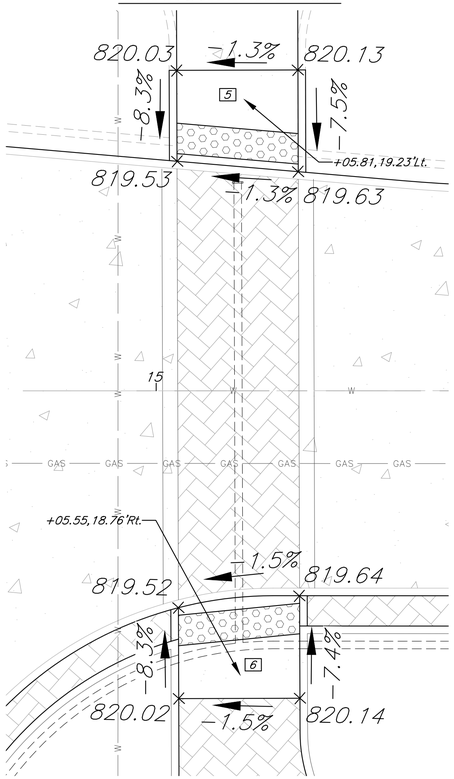

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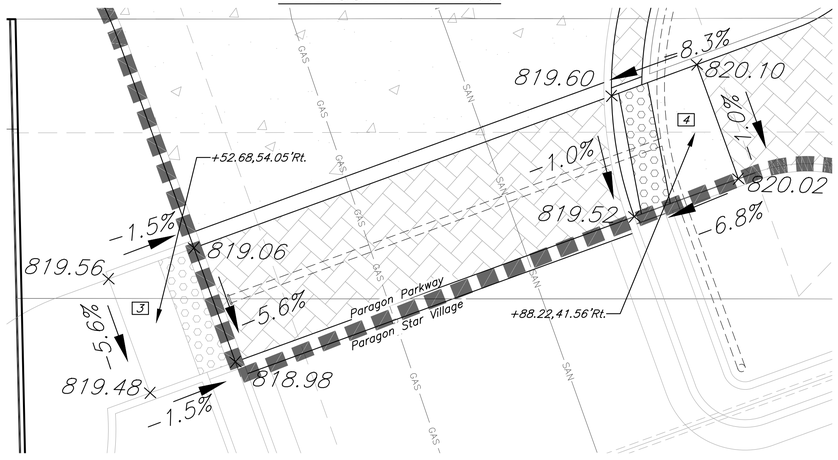
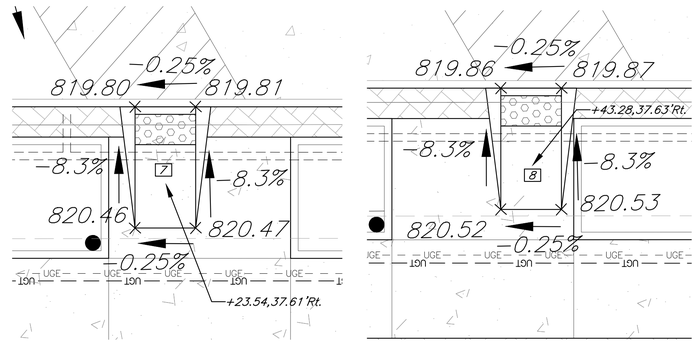


PARAGON PKWY - Parking Entry Ramps



Legend

Paragon Parkway / Paragon Star Village — Construction Line for Paragon Parkway and Paragon Star Village

Intersection Enlargements

Legend

Paragon Parkway / Paragon Star Village	Construction Line for Paragon Parkway and Paragon Star Village

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DRAWN BY:	DRV/DGL
PROJECT NO.:	12720
SHEET NO.	10
TOTAL SHEETS	51

Street and Storm Sewer Plans
Paragon Parkway
Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing 10/16/2020		

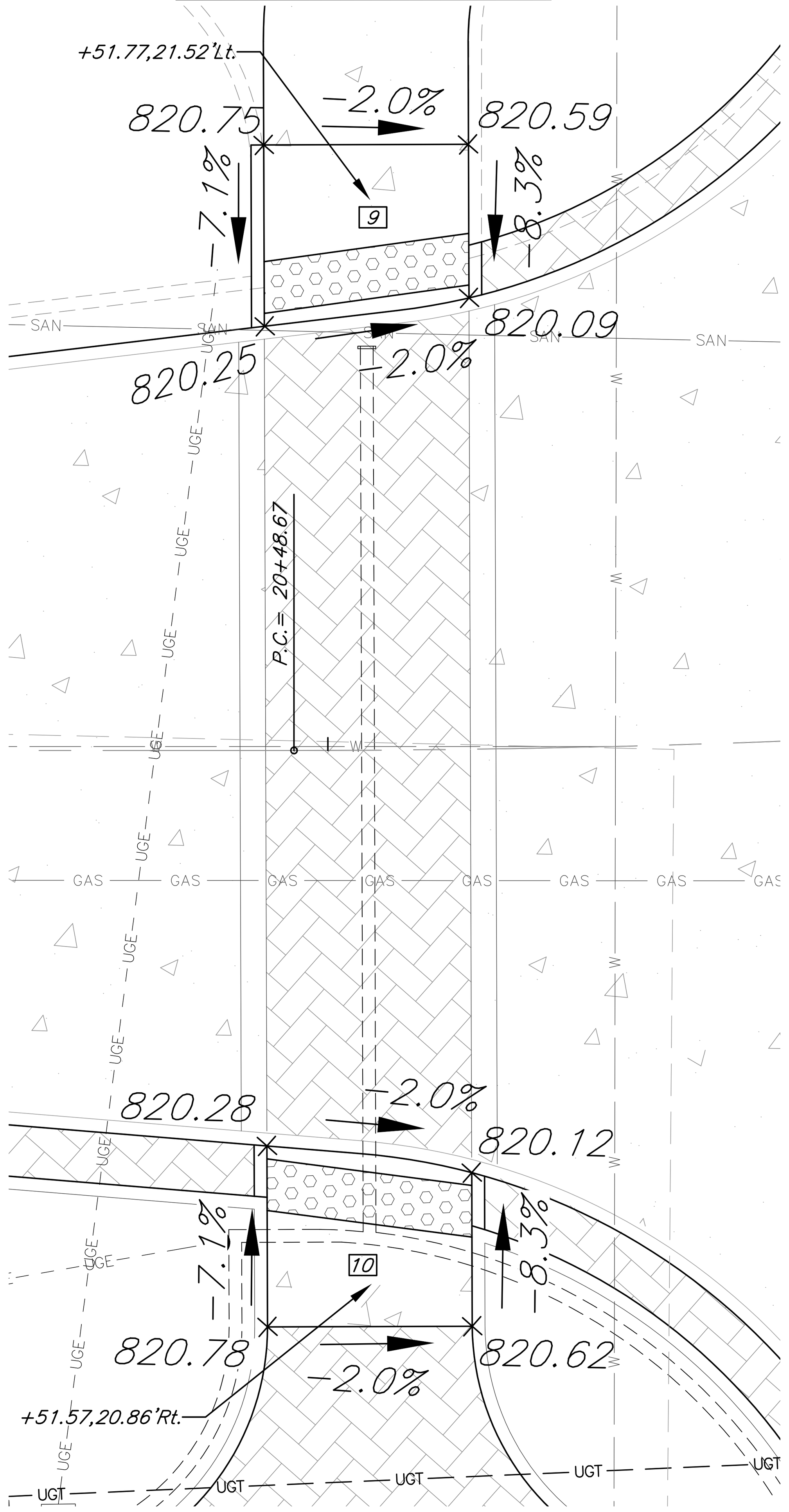
LEGEND

R/W Right of Way
TC Top of Curb
[1] Ramp ID — See sheet 19 for details

NOTE:
1. All Elevations are to Top of Curb unless otherwise noted.
2. See Sheet 19 for Curb & Gutter Detail.
3. See Sheet 20 for Sidewalk Ramp Details.
4. Install Type "A" S/W Ramp unless otherwise noted.

5' 0' 5' 10'
SCALE : 1 INCH = 5 FEET

PARAGON PKWY - West



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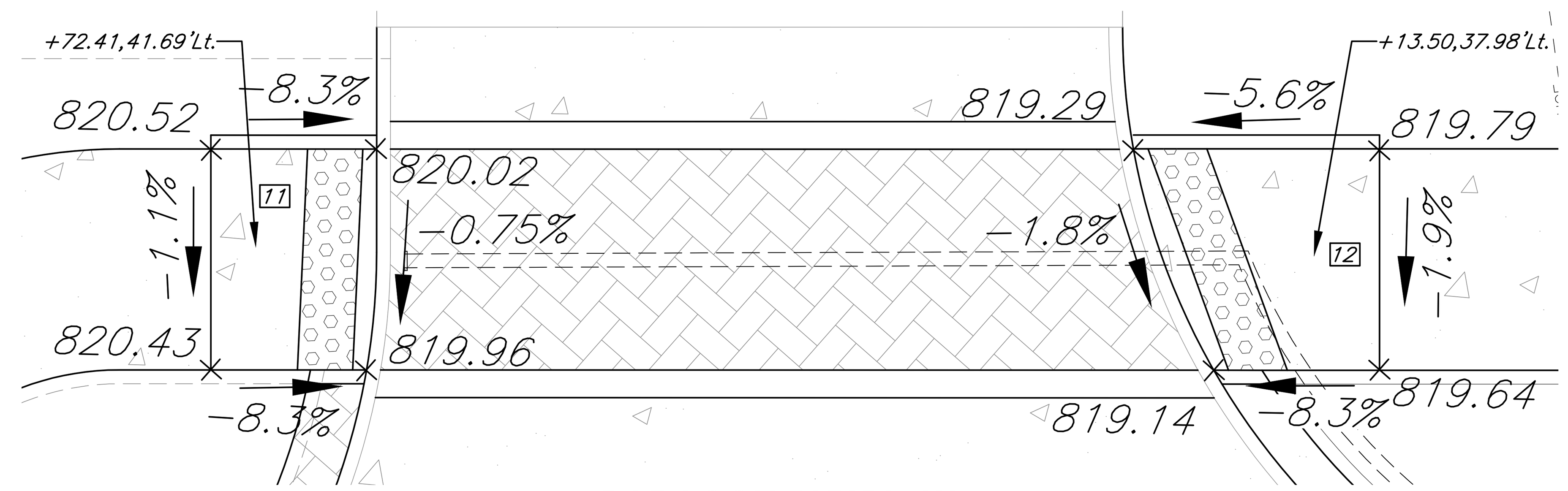

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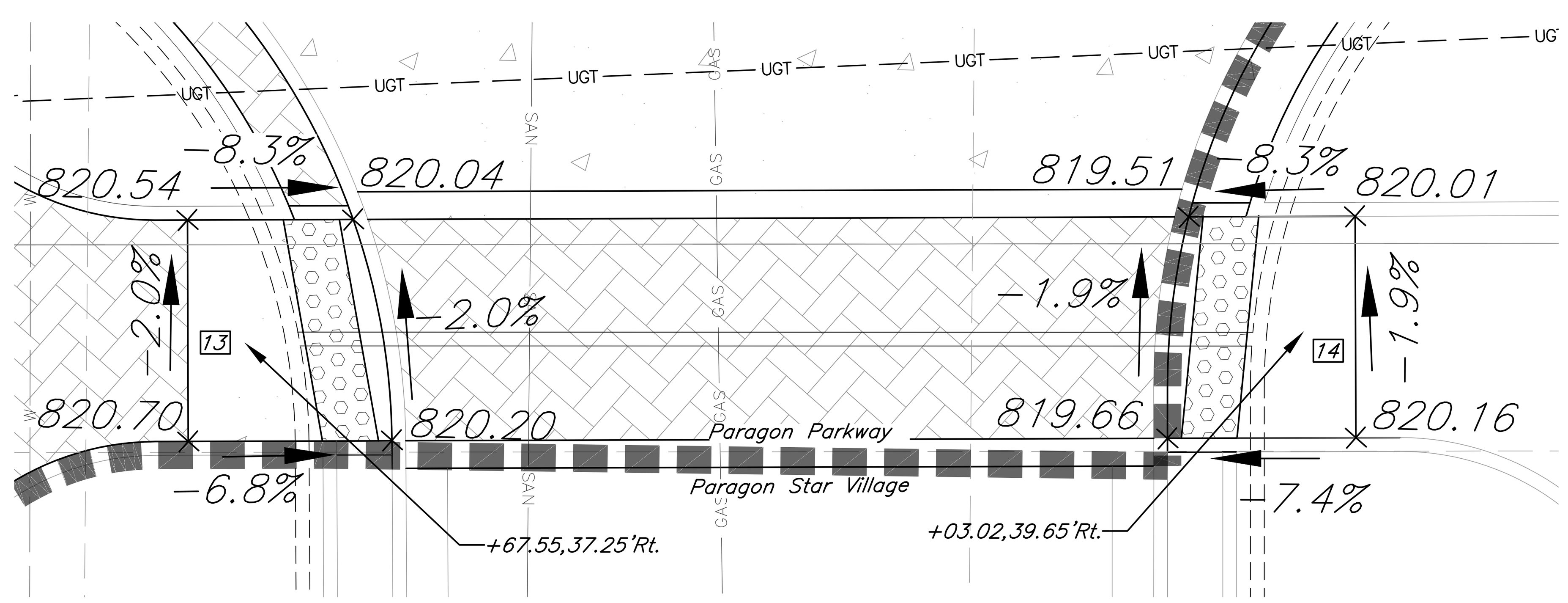

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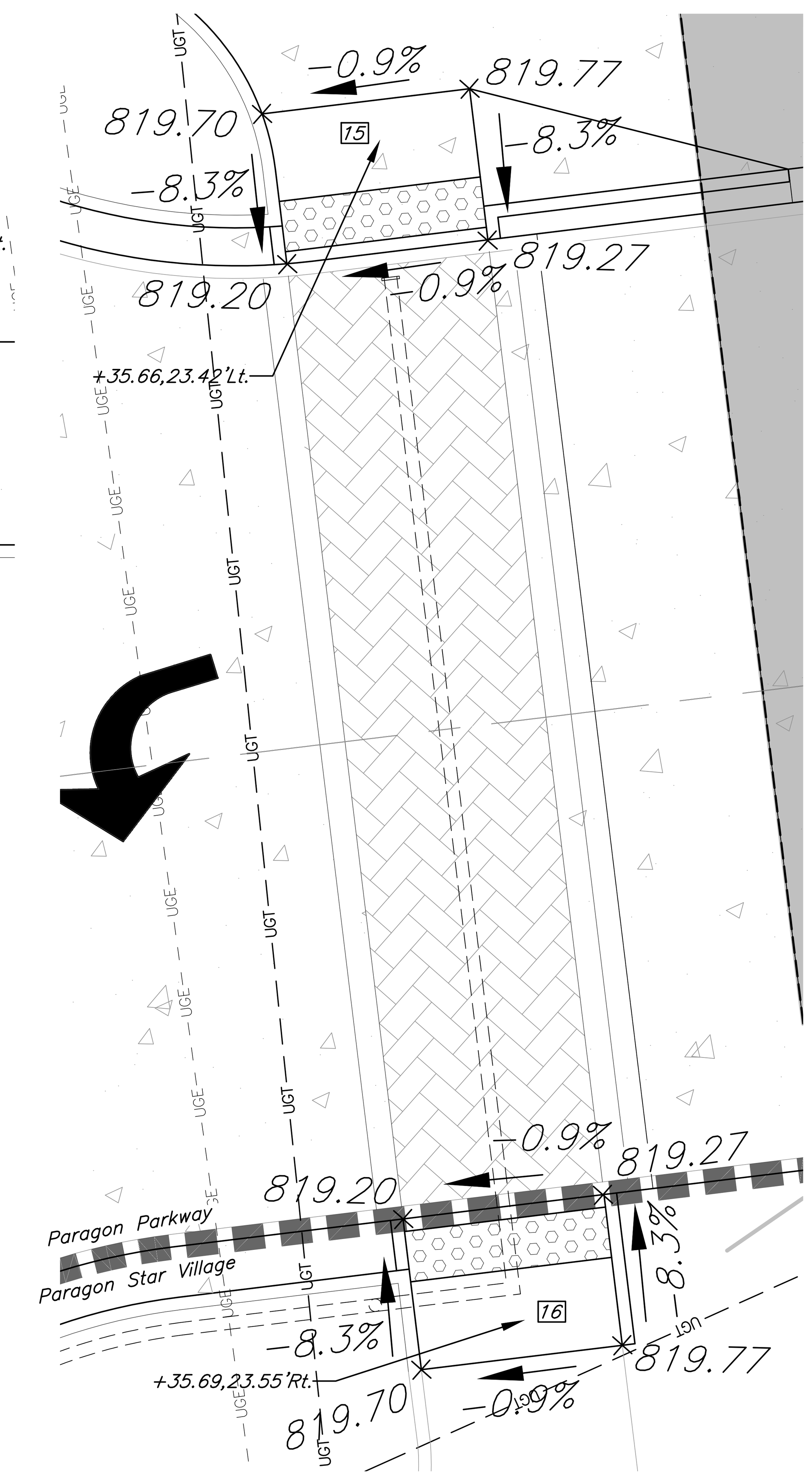
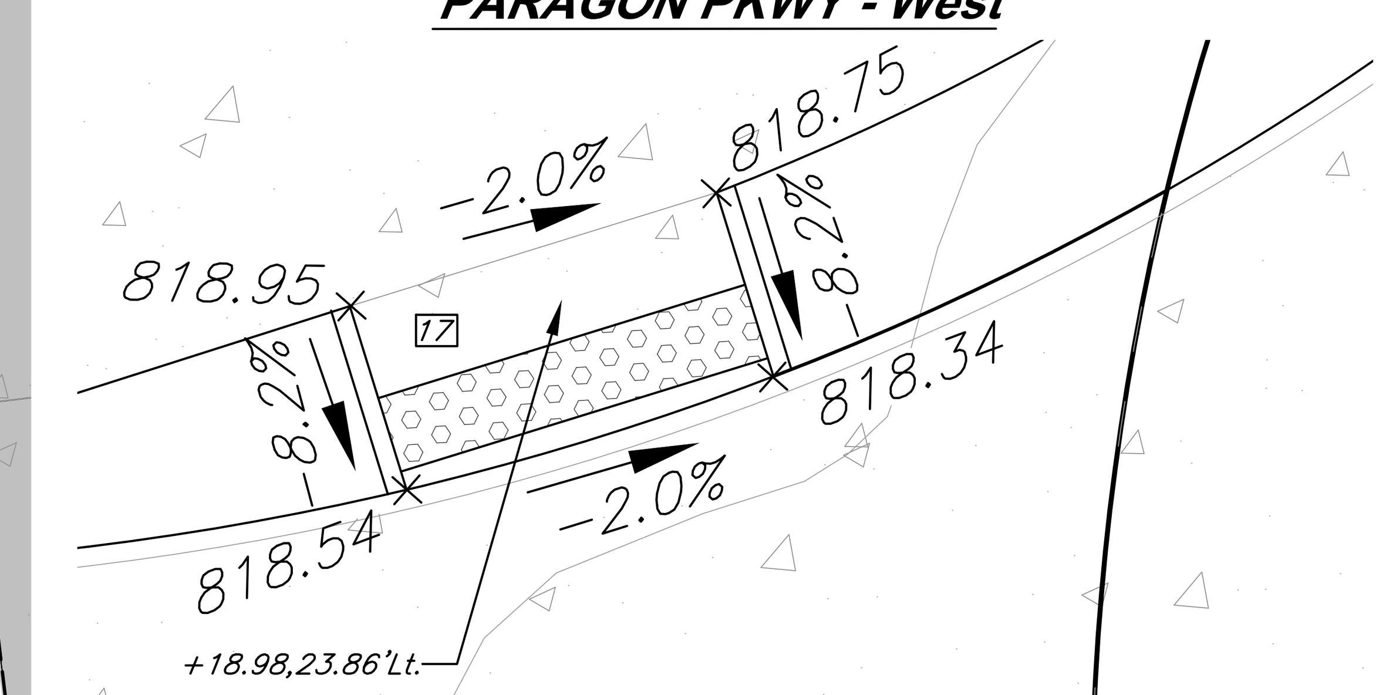
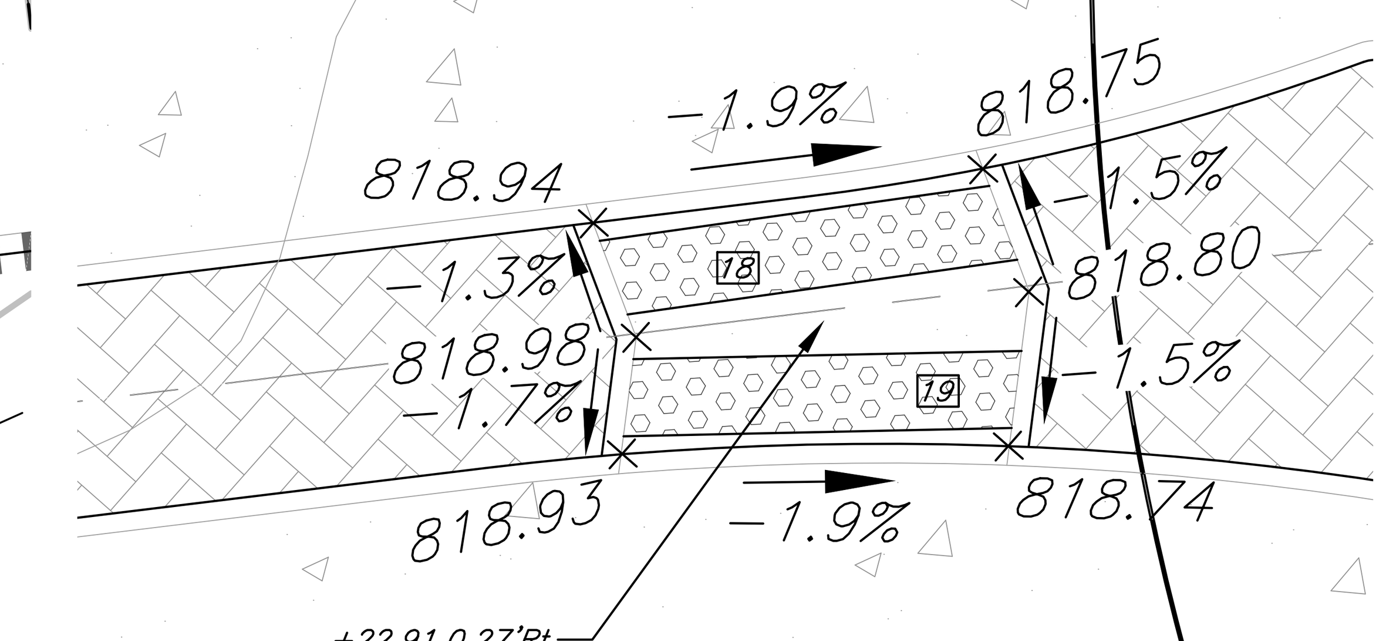
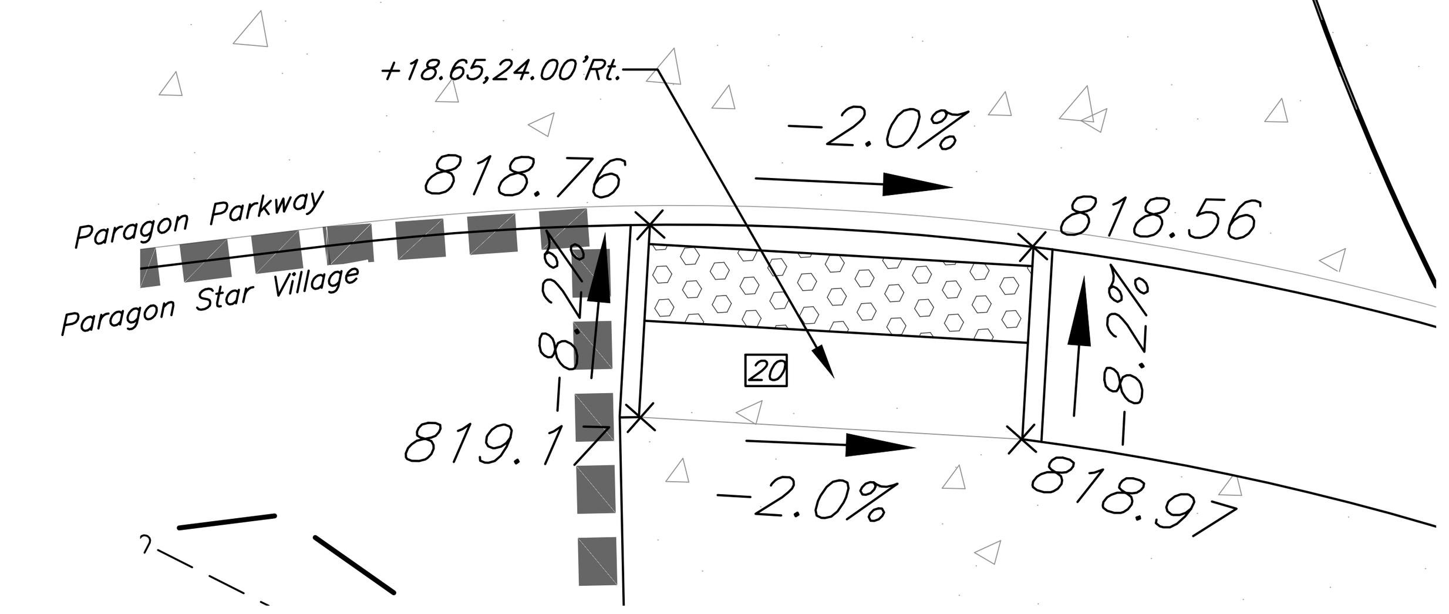


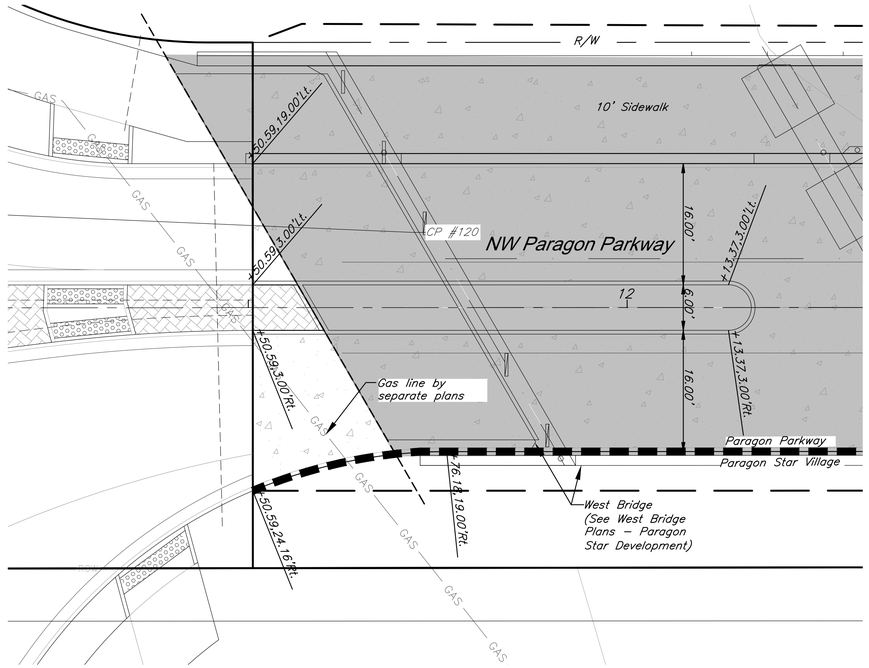
PARAGON PKWY - West

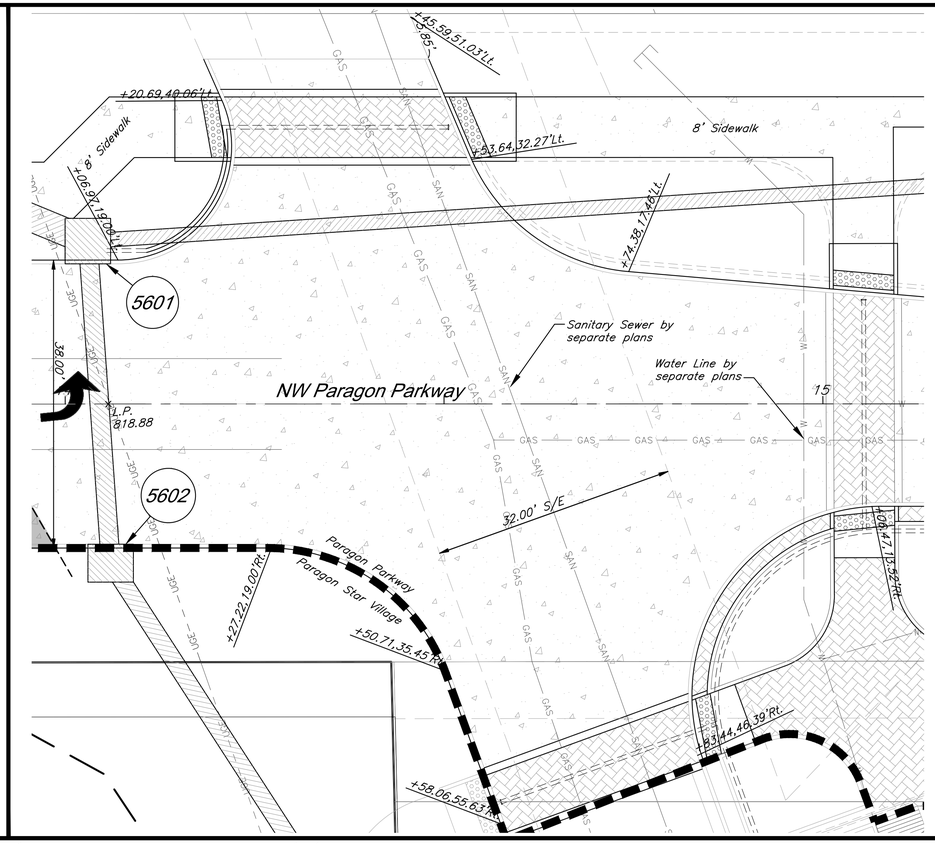






Intersection Enlargements





DATE:	11-4-2020
DESIGN BY:	CEL
DRAWN BY:	DRV/DGL
PROJECT NO.:	12720
SHEET NO.	11
TOTAL SHEETS	51

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Street and Storm Sewer Plans

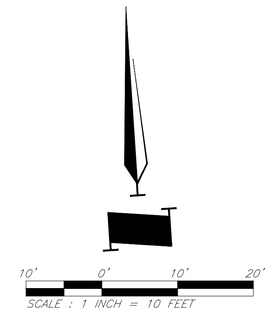
Paragon Parkway

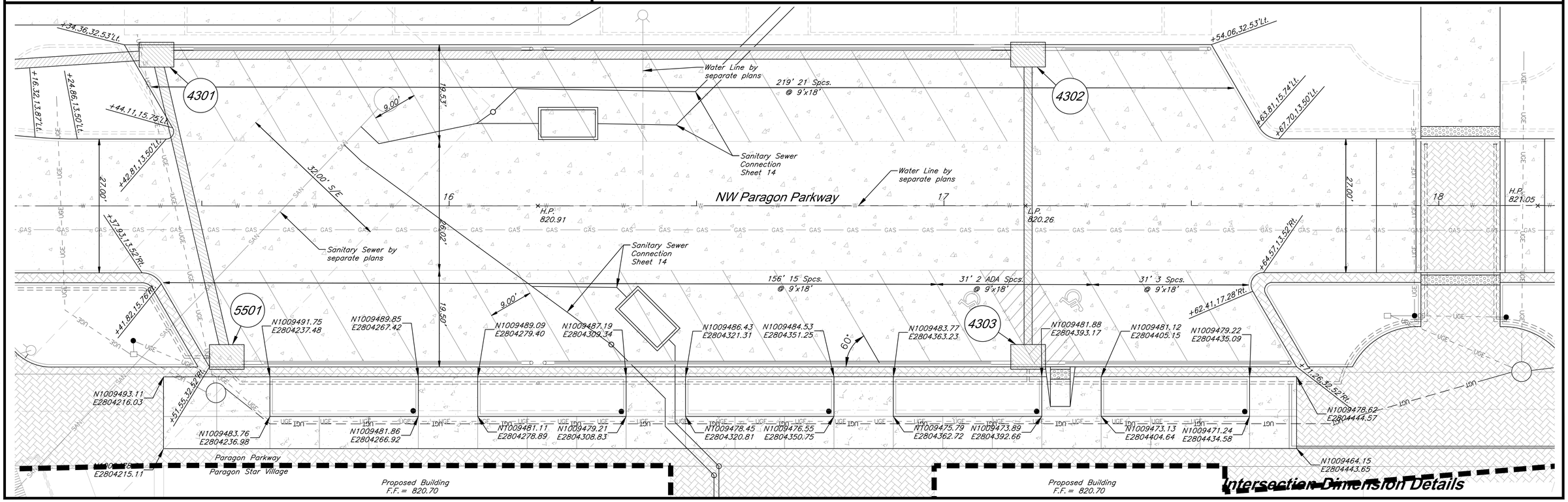
Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing 10/16/2020		

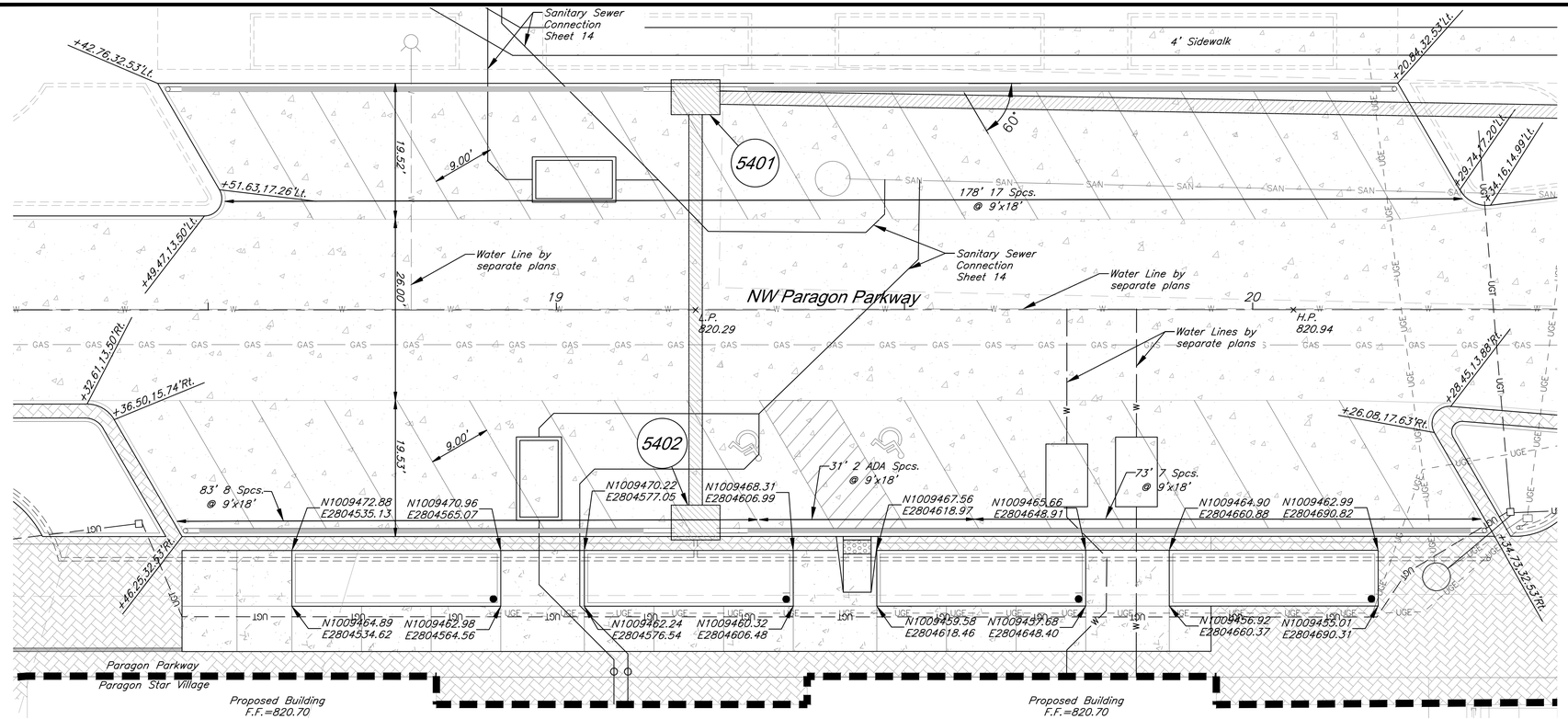
Legend

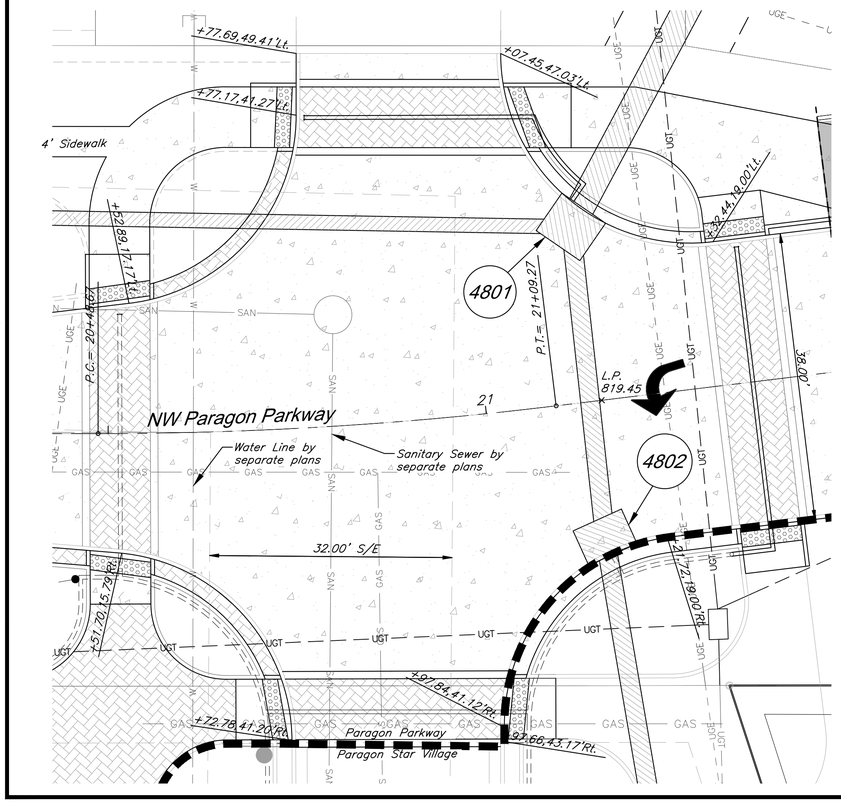
Paragon Parkway / Paragon Star Village — Construction Line for Paragon Parkway and Paragon Star Village

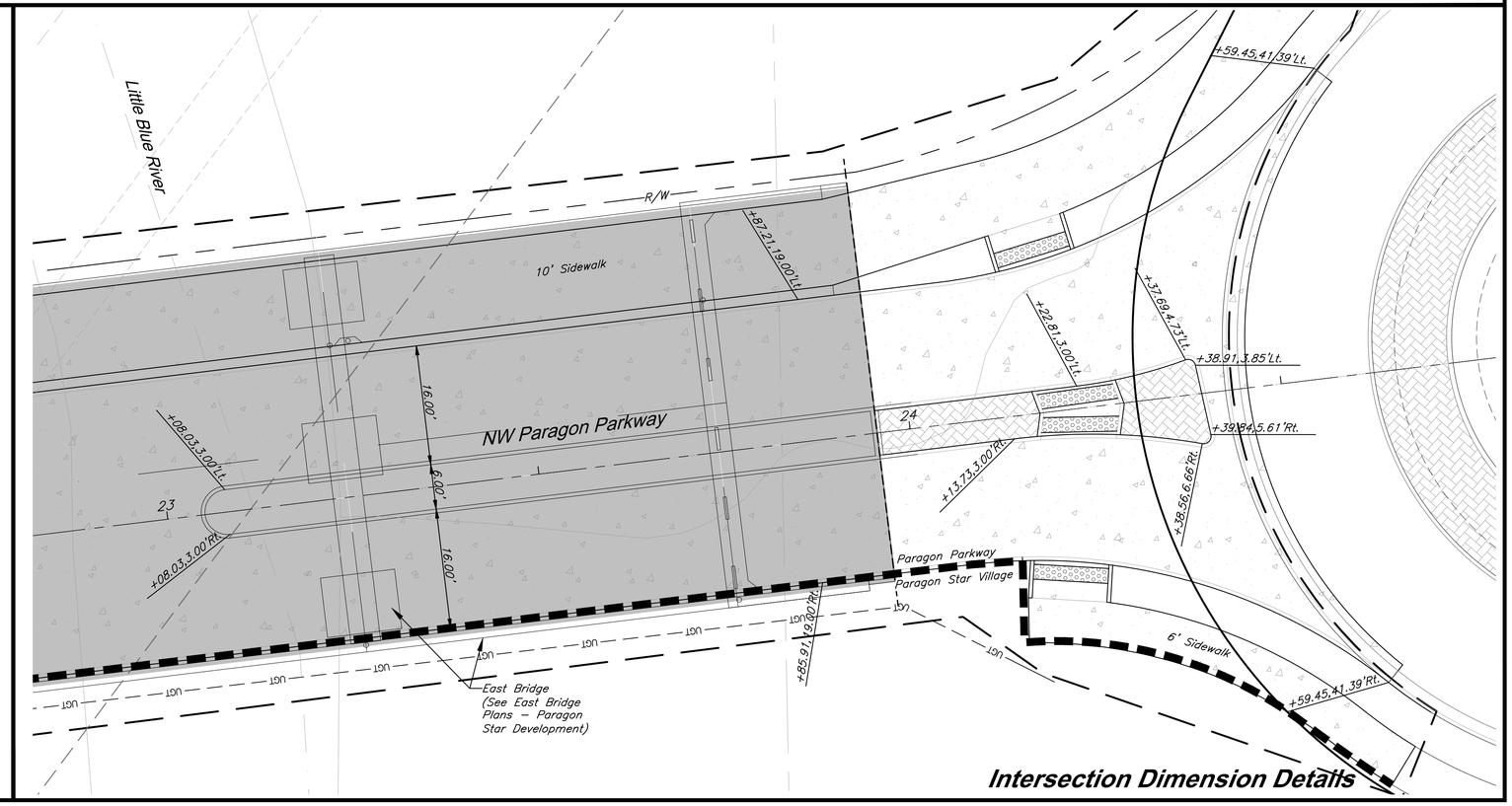




Intersection Dimension Details







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DESIGN BY:	CEL
DRAWN BY:	DRV/DGL
PROJECT NO.:	12720
SHEET NO.	12
TOTAL SHEETS	51

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Street and Storm Sewer Plans

Paragon Parkway

Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing 10/16/2020		

Legend

Paragon Parkway / Paragon Star Village — Construction Line for Paragon Parkway and Paragon Star Village

10' 0' 10' 20'
SCALE : 1 INCH = 10 FEET

FLOODPLAIN NOTE:

According to FEMA Flood Insurance Rate Map (FIRM) Community Panel No. 29095C0404G, effective Date 1/20/17, the tract lies partially within an area designated as Special Flood Hazard Areas. Special Flood Hazard Areas defined on portions of the site include regulatory floodway, Zone AE (with depths identified on site from 810 to 811), and 0.2% Annual Chance Flood Hazard Areas.

A CLOMR has been provided for this project, case number 20-07-0520R, received 2/14/20.

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DATE:	11-4-2020
DESIGN BY:	CEL
DRAWN BY:	DRV/DGL
PROJECT NO.:	12720
SHEET NO:	13
TOTAL SHEETS	51

Clint Loumaster
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Street and Storm Sewer Plans

Paragon Parkway

Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
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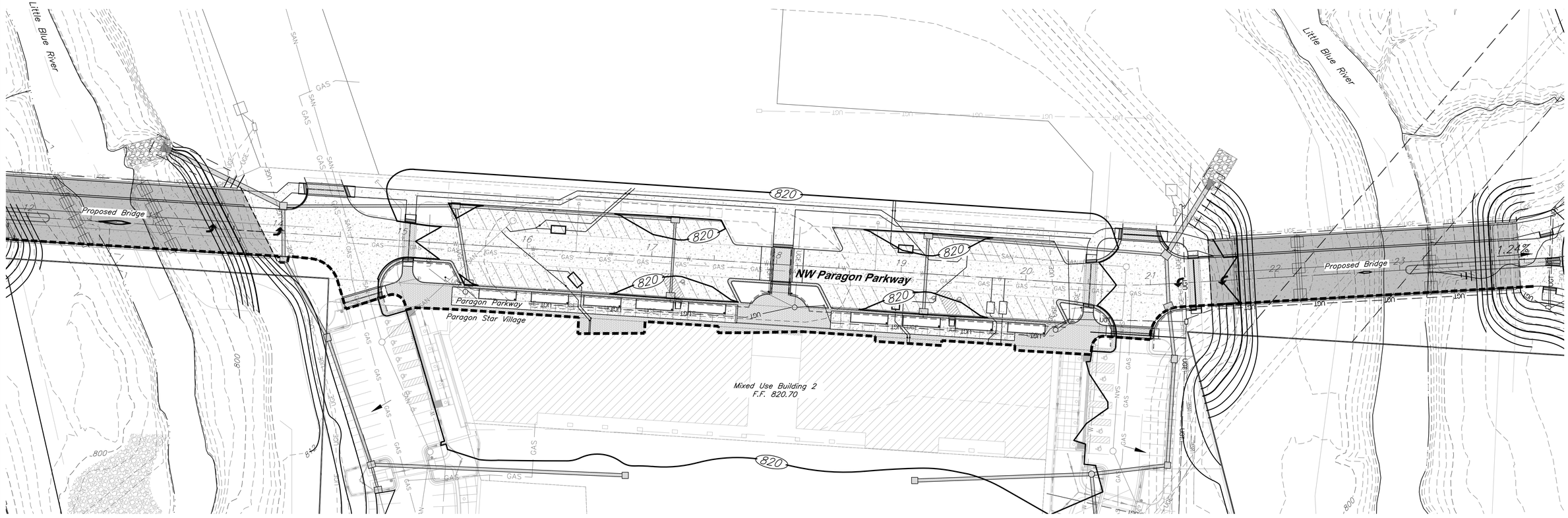


CAUTION!

Numerous Utilities on site. Contractor to verify location and elevation of all utilities prior to commencing construction.

Note: Minimum finish floor of all buildings on lots within the proposed floodplain is 813.00.

LEGEND

- 900 — *Existing Contour*
- 900 — *Proposed Contour*
- *Drainage Flow Arrow*
- Paragon Parkway / Paragon Star Village — *Construction Line for Paragon Parkway and Paragon Star Village*

40' 0' 40' 80'

SCALE : 1 INCH = 40 FEET

Grading Plan

Sanitary Sewer Construction Notes

(S1) Connect 6" Service Line to Sanitary Sewer Line E, Sta=1+30.5 ℄=808.68 Install 48 LF 6" Dia. SRD26 PVC pipe @ 5.75% to S2.

(S2) Install wye connection, ℄=811.44. Install 66 LF 6" Dia. SDR26 PVC pipe @ 4.64% to S3. Install 20 LF 4" Dia. SDR26 PVC pipe @ 5.15% to S4.

(S3) Connect to 6" building stub, ℄=814.50. See MEP plan for continuation.

(S4) Connect 4" to grease interceptor, ℄=812.47.

(S5) Install 2000 gallon grease interceptor. See Utility Details Sheet 22.

(S6) Connect 4" to grease interceptor, ℄=812.47. Install 42 LF 4" Dia. SDR26 PVC pipe @ 4.83% to S7.

(S7) Connect to 4" building stub, ℄=814.50. See MEP plan for continuation.

(S8) 45° Bend

(S9) 22.5° Bend

(S10) Connect to Sanitary Sewer Line D, Sta=9+65.50, ℄=811.08 Install 43 LF 6" Dia. SRD26 PVC pipe @ 1.00% to S11.

(S11) Install wye connection, ℄=811.51. Install 68 LF 6" Dia. SDR26 PVC pipe @ 1.28% to S12. Install 34 LF 4" Dia. SDR26 PVC pipe @ 1.03% to S13.

(S12) Connect to 6" building stub, ℄=812.38. See MEP plan for continuation.

(S13) Connect 4" to grease interceptor, ℄=811.86.

(S14) Install 2000 gallon grease interceptor. See Utility Details Sheet 22.

(S15) Connect 4" to grease interceptor, ℄=811.86. Install 31 LF 4" Dia. SDR26 PVC pipe @ 1.68% to S16.

(S16) Connect to 4" building stub, ℄=812.38. See MEP plan for continuation.

(S17) Install Cleanout W/Casting

(S18) Connect 6" Service Line to Sanitary Sewer Line D, Sta=9+70.50, ℄=811.12. Install 42 LF 6" Dia. SRD26 PVC pipe @ 1.0% to S19.

(S19) Install wye connection, ℄=811.54. Install 47 LF 6" Dia. SDR26 PVC pipe @ 3.53% to S20. Install 6 LF 4" Dia. SDR26 PVC pipe @ 2.67% to S21.

(S20) End of 6" Service Line. Cap end of pipe ℄=813.20.

(S21) Connect 4" to grease interceptor, ℄=811.70.

(S22) Install 2000 gallon grease interceptor. See Utility Details Sheet 22.

(S23) Connect 4" to grease interceptor, ℄=811.70. Install 42.5 LF 4" Dia. SDR26 PVC pipe @ 3.53% to S24.

(S24) Cap End of 4" Service Line. Future building stub connection, ℄=813.20.

(S25) Connect 6" Service Line to Sanitary Sewer Line E, Sta. 1+35.50, ℄=808.74 Install 26 LF 6" Dia. SRD26 PVC pipe @ 3.69% to S26.

(S26) Install wye connection, ℄=809.70. Install 90 LF 6" Dia. SDR26 PVC pipe @ 1.26% to S27. Install 13 LF 4" Dia. SDR26 PVC pipe @ 1.46% to S28.

(S27) Cap End of Service Line. Future building stub connection, ℄=810.83.

(S28) Connect 4" to grease interceptor, ℄=809.89.

(S29) Install 2000 gallon grease interceptor. See Utility Details Sheet 22.

(S30) Connect 4" to grease interceptor, ℄=809.89. Install 69 LF 4" Dia. SDR26 PVC pipe @ 1.36% to S31.

(S31) End of Service Line Cap and Plug for future connect to 4" building stub, ℄=810.83.

General Utility Notes

1. See Sheets 4 and 23 for Typical Street Section and Streetscape Details.
2. See Sheets 41–45 for Street Lighting and location of equipment.
3. See Sheet 22 for Utility Details
4. Contractor to deflect conduits as necessary to avoid conflicts with other utilities.
5. Contractor shall coordinate with the Surveyor to leave trenches open for collecting survey data for record drawings.
6. See Intersection Grading Details and Storm Sewer Details for Trench Drain.
7. Gas line to be constructed by Spire.

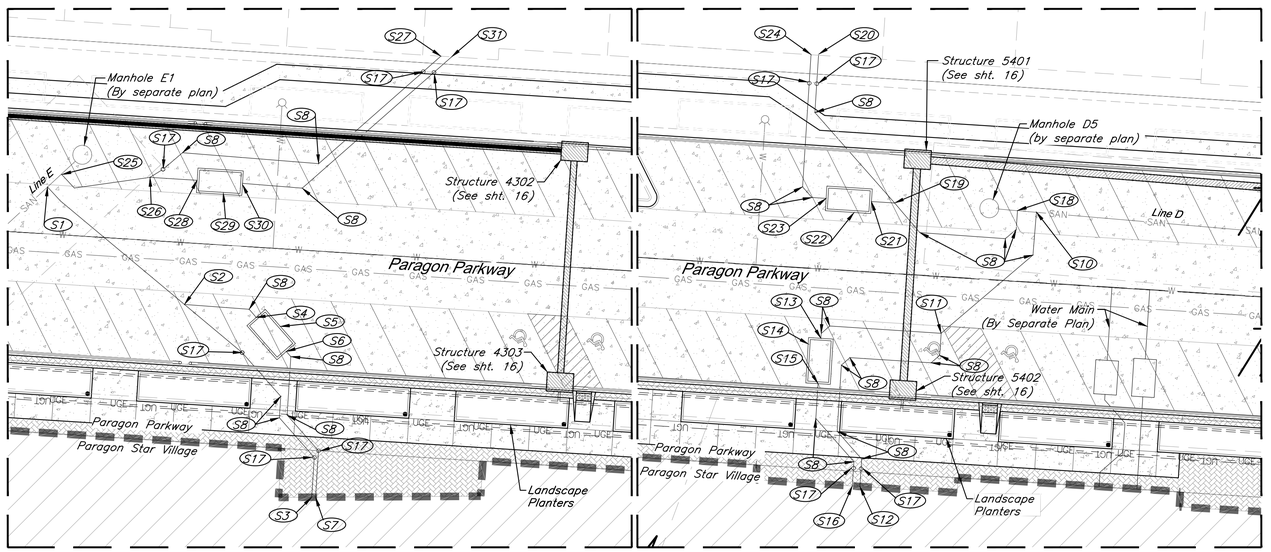
Legend:

- Street (Asphalt)
- Street (Concrete)
- Brick Pavers
- Proposed Storm Sewer
- Storm Sewer (By Separate Plan)
- 6" HDPE Underdrain
- UGE — Underground Electric
- UGT — Underground Telecom
- W — Proposed 8" PVC Water Main (By Separate Plan)
- GAS — Proposed 2" or 4" HDPE Gas Main (By Spire)
- SAN — Sanitary Sewer (By Separate Plan)
- Paragon Parkway — Construction Line for Paragon Parkway and Paragon Star Village
- Paragon Star Village

PROJECT BENCHMARKS

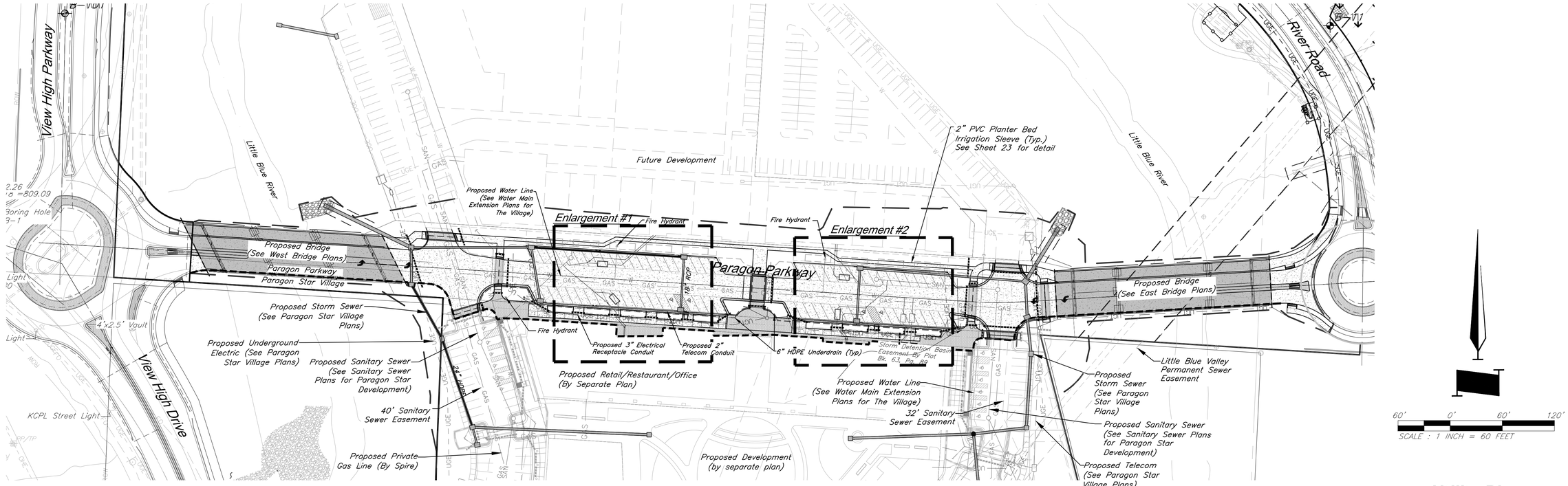
BM #11 – Chiseled "L" on top Northeast corner of concrete guardrail at the Northeast corner of I470 bridge spanning View High Drive. EL=833.80

CAUTION!
Existing Utilities shown per the best information available to the Engineer. Contractor to locate existing utilities and irrigation system prior to construction



Enlargement #1
Scale: 1"=10'

Enlargement #2
Scale: 1"=10'



60' 0' 60' 120'
SCALE : 1 INCH = 60 FEET

Utility Plan

Notes:

1. Pipe length called out is from center of structure to center of structure. Payment for pipe length is from inside face to inside face of structure.
2. Storm Sewer Structure Station offset and coordinates based on center of structure. Top elevations are top center of lid.
3. Tops on all in grade inlets shall maintain street slope, low point inlets to be set level.
4. Boring information based on original undisturbed earth – see Geotechnical report.

STATE OF MISSOURI · CLINT LOUMASTER · NUMBER PE-2011009651 · 11/1/2020 · REGISTERED PROFESSIONAL ENGINEER

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DATE:	11-4-2020
DESIGN BY:	CEL
DRAWN BY:	DRV/DGL
PROJECT NO.:	12720
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TOTAL SHEETS	51

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Street and Storm Sewer Plans
Paragon Parkway
Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
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Electrical Service Construction Notes

- (E1) Install 12"x16" In-grade Quazite Electrical Box
- (E2) Install 13 LF 3" HDPE Conduit to Digital Display
- (E3) Install 44 LF 3" HDPE Conduit to Receptacle
- (E4) Install 154 LF 3" HDPE Conduit to Receptacles
- (E5) Install 27 LF 3" HDPE Conduit to Digital Display
- (E6) Install 16 LF 3" HDPE Conduit to Digital Display
- (E7) Install 232 LF 3" HDPE Conduit to Receptacles
- (E8) Install 24 LF 3" HDPE Conduit to Receptacles
- (E9) Install 60 LF 3" HDPE Conduit across road. Cap End of Conduit.
- (E10) Install 73 LF 3" HDPE Conduit across road. Cap End of Conduit.
- (E11) Install 46 LF 3" HDPE Conduit across road. Cap End of Conduit.
- (E12) Install 63 LF 3" HDPE Conduit across road. Cap End of Conduit.
- (E13) Install 74 LF 3" HDPE Conduit across road. Cap End of Conduit.
- (E14) Install 50 LF 3" HDPE Conduit across road. Cap End of Conduit.
- (E15) Proposed High Voltage 200 Amp Fuse/Switch (3'x6') Above Grade - Construct Pad per Evergy Standards.
- (E16) Install 12 LF 4" PVC Conduit.
- (E17) Install 122 LF 4" PVC Conduit south to E20.
- (E18) Install 19 LF 4 PVC Conduit north. Cap End of Conduit.
- (E19) Install 93 LF 4" PVC Conduit south to E20.
- (E20) Continue 4" PVC Conduit south per Paragon Star Village Plans.
- (E21) Construct 9'x9' Concrete Building Transformer Pad
- (E22) Install 51 LF 4" PVC Conduit south. Continue Conduit per Bridge Plans.
- (E23) Install 49 LF 4" PVC Conduit south. Continue Conduit per Bridge Plans
- (E24) Install 48 LF 4" PVC Conduit south. Continue Conduit per Bridge Plans

Electrical Service General Notes

1. All electrical work shall conform to Evergy Standards
2. Electrical routing reflects the latest, although preliminary designs from Evergy. Final routing of conduit shall match Final design from Evergy.
3. Electrical conduit shall be NEC approved schedule 40 gray PVC.
4. All electrical weather proof/resistant receptacles shall have maximum 6' liquid tight flexible conduit connection from weather proof above grade junction box with HDPE conduit 3" AFG. switched hot routed through lighting management system (relay panel)

Telecom Construction Notes

- (T1) Install Telecom Utility Pull Box. 30"x48" Pre-Formed Polymer Concrete Handhole
- (T2) Install 3 LF 5" HDPE Conduit to R/W. Continue conduit south per Paragon Star Village Plans
- (T3) Install 92 LF 5" HDPE Conduit
- (T4) Install Digital Display with Power/Data Connections, Unswitched Hot Power.
- (T5) Install Telecom Utility 12"x12" Quazite Box
- (T6) Install 89 LF 3" PVC Conduit
- (T7) Install 12 LF 2" PVC Conduit
- (T8) Install 211 LF 2" PVC Conduit
- (T9) Install 21 LF 2" PVC Conduit
- (T10) Install 264 LF 2" PVC Conduit
- (T11) Install 55 LF 3" PVC Conduit across road. Cap End of Conduit.
- (T12) Install 23 LF 5" HDPE Conduit east. Continue Conduit per Bridge Plans

Telecom General Notes

1. Telecom pull boxes shall have open bottom with pea gravel and ANSI tier rating for traffic requirements at location. Provide Quazite PG3048-Series or equal.

Underdrain Construction Notes

- (UD1) Install 30 LF 6" Dia. Perforated HDPE. Install 27 LF 6" Dia. PVC, connect to Storm Structure 4101.
- (UD2) Install 31 LF 6" Dia. Perforated HDPE with Tee.
- (UD3) Install 101 LF 6" Dia. Perforated HDPE with 90° Elbow. Install 5 LF 6" Dia. PVC, connect to Storm Structure 5501.
- (UD4) Install 286 LF 6" Dia. Perforated HDPE with Tee. Connect to Storm Structure 5501. Install 3 LF 6" PVC. Connect to Storm Structure 4303.
- (UD5) Install 265 LF 6" Dia. Perforated HDPE with Tee. Install 3 LF 6" PVC. Connect to Storm Structure 5402.
- (UD6) Install 62 LF 6" Dia. Perforated HDPE.
- (UD7) Install 35 LF 6" Dia. Perforated HDPE with Tee.
- (UD8) Install 35 LF 6" Dia. Perforated HDPE with (2) Tees.
- (UD9) Install 55 LF 6" Dia. Perforated HDPE. Install 4 LF 6" PVC. Connect to Storm Structure 4802.
- (UD10) Install 41 LF 6" Dia. Perforated HDPE with Elbow.
- (UD11) Install 42 LF 6" Dia. Perforated HDPE. Install 3 LF 6" PVC. Connect to Storm Structure 4801.

Irrigation Sleeve Lengths

Sleeve #	Length (FT)
I1	13.5
I2	47.5
I3	21
I4	11
I5	10
I6	33.5
I7	11.5
I8	23
I9	18
I10	19.5
I11	33
I12	20
I13	25
I14	13.5
I15	22.5
I16	11
I17	36
I18	22.5
I19	12.5
I20	11
I21	42.5
I22	39
I23	13.5
I24	47

PROJECT BENCHMARKS

BM #11 - Chiseled "L" on top Northeast corner of concrete guardrail at the Northeast corner of I470 bridge spanning View High Drive. EL=833.80

Legend:

- Street (Asphalt)
- Street (Concrete)
- Brick Pavers
- Proposed Storm Sewer
- Storm Sewer (By Separate Plan)
- Paragon Parkway
- Paragon Star Village
- 6" HDPE Underdrain
- UGE Underground Electric
- UGT Underground Telecom
- W Proposed 8" PVC Water Main (By Separate Plan)
- GAS Proposed 2" or 4" HDPE Gas Main (By Spire)
- SAN Sanitary Sewer (By Separate Plan)
- Construction Line for Paragon Parkway and Paragon Star Village

Notes:

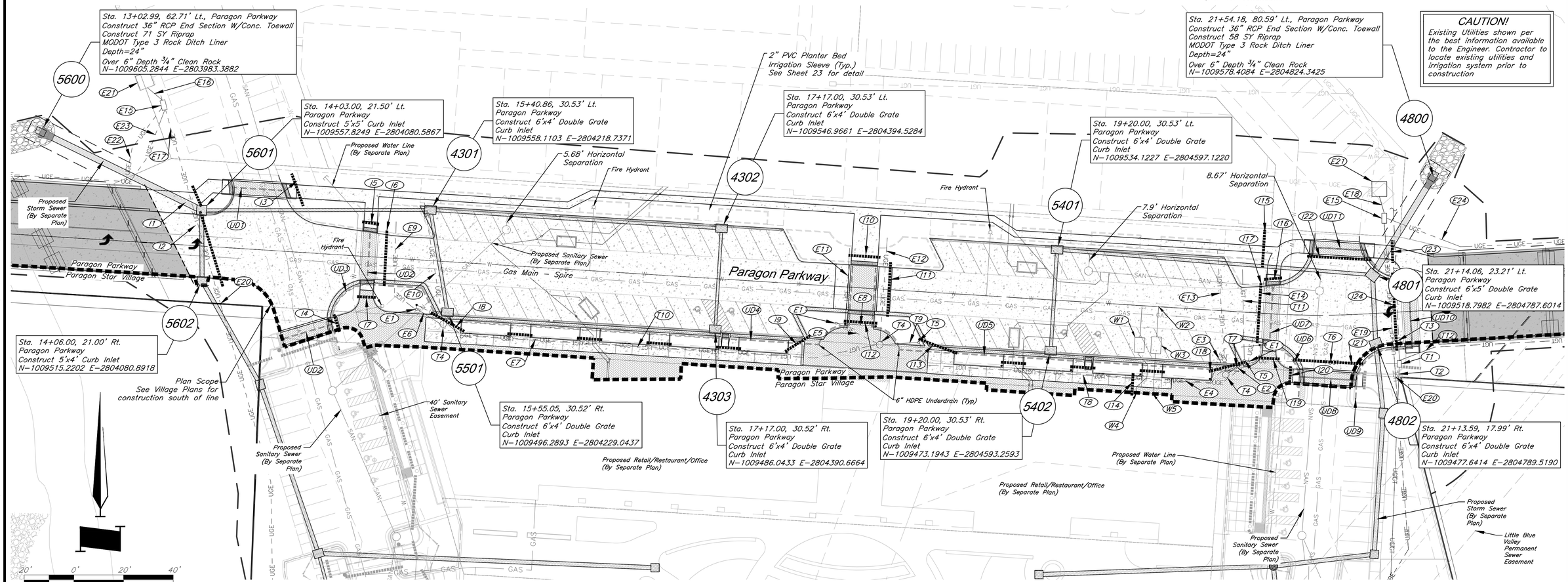
1. Pipe length called out is from center of structure to center of structure. Payment for pipe length is from inside face to inside face of structure.
2. Storm Sewer Structure Station offset and coordinates based on center of structure. Top elevations are top center of lid.
3. Tops on all in grade inlets shall maintain street slope, low point inlets to be set level.

General Utility Notes

1. See Sheets 4 and 23 for Typical Street Section and Streetscape Details.
2. See Sheets 41-45 for Street Lighting and location of equipment.
3. See Sheet 22 for Utility Details
4. Contractor to deflect conduits as necessary to avoid conflicts with other utilities.
5. Contractor shall coordinate with the Surveyor to leave trenches open for collecting survey data for record drawings.
6. See Intersection Grading Details and Storm Sewer Details for Trench Drain.
7. All irrigation sleeves to be 2" PVC. Install sleeve 1' into planting area.
8. Gas line to be constructed by Spire.

Water Line Construction Notes

- (W1) Water Meter in Traffic-Bearing Concrete Vault. Meter to be sized by MEP by separate plan.
- (W2) Fire Department Connection. See MEP plans.
- (W3) Backflow Preventer in Traffic-Bearing Concrete Vault. Backflow preventer to be sized by MEP by separate plan.
- (W4) Domestic Water Line Building Connection. See MEP plan for continuation.
- (W5) Fire Protection Line Building Connection. See MEP plan for continuation.



CAUTION!

Existing Utilities shown per the best information available to the Engineer. Contractor to locate existing utilities and irrigation system prior to construction

Utility Plan - Paragon Parkway

STATE OF MISSOURI
CLINT LOUMASTER
NUMBER PE-2011009651
11/4/2020
REGISTERED PROFESSIONAL ENGINEER

GBA architects engineers
9801 Renner Boulevard
Lenexa, Kansas 66219
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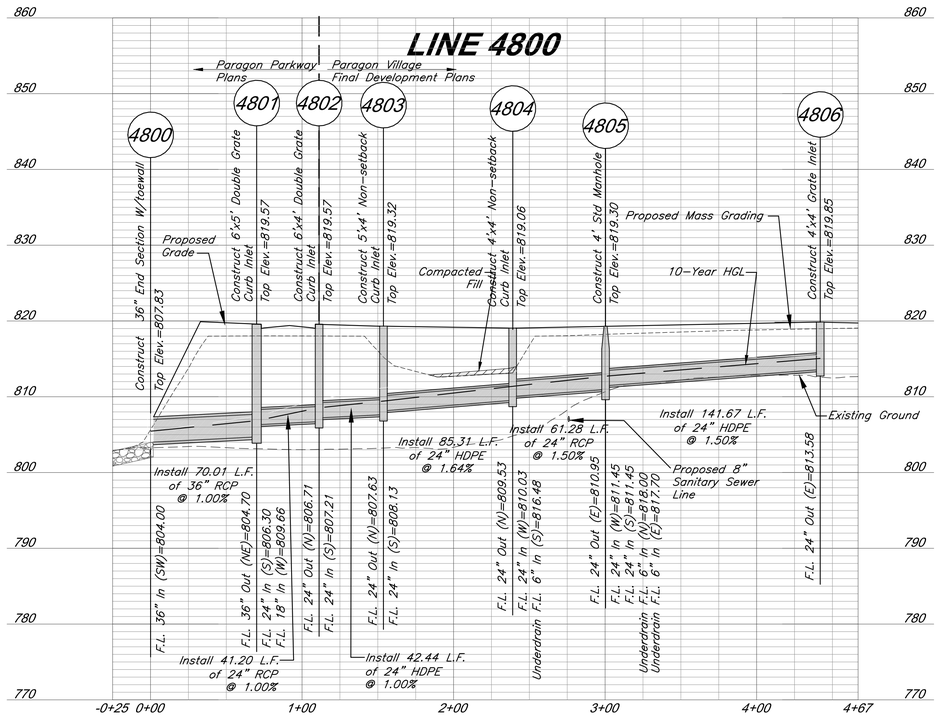
www.gbateam.com

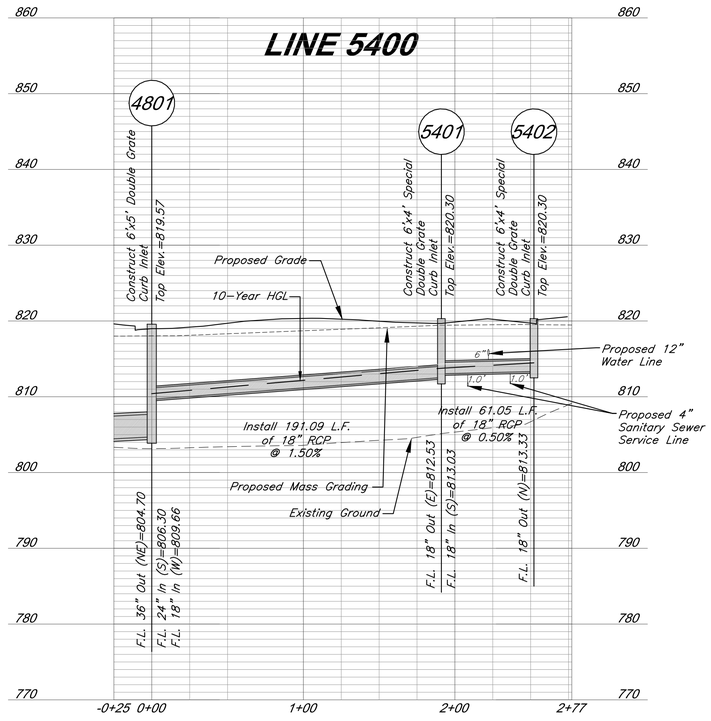
DATE:	11-4-2020
DESIGN BY:	CEL
DRAWN BY:	DRV/DGL
PROJECT NO.:	12720
SHEET NO.	15
TOTAL SHEETS	51

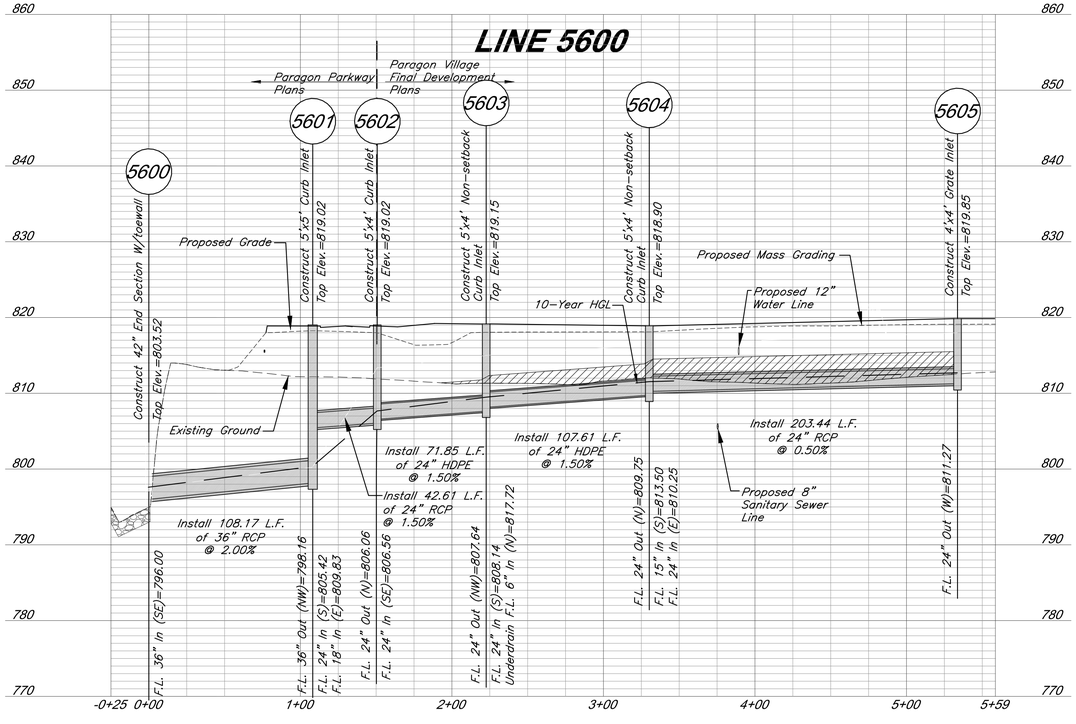
Clint Loumaster
Professional Engineer
License No. PE2011-009651

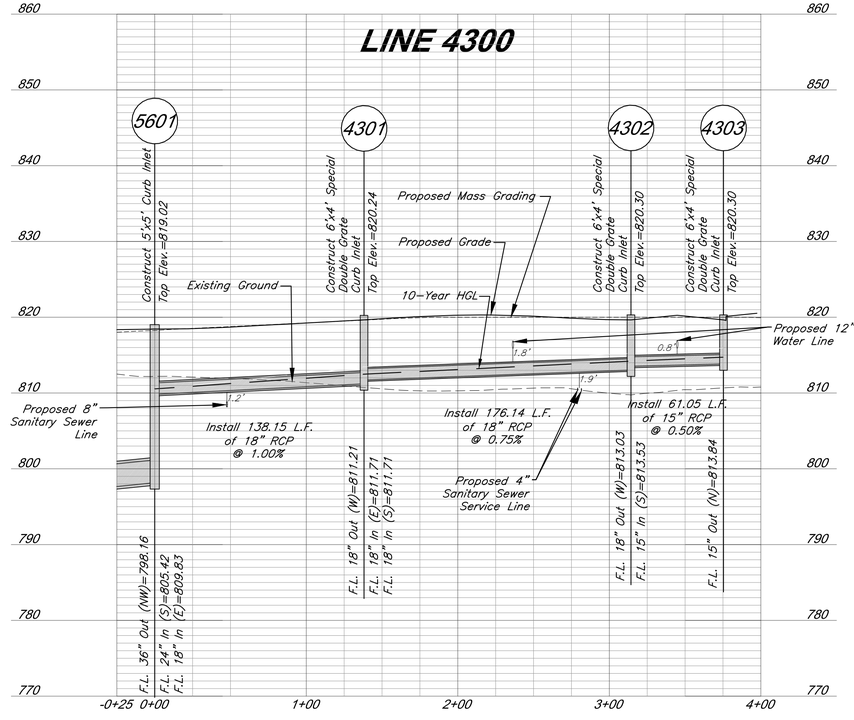
Street and Storm Sewer Plans
Paragon Parkway
Lee's Summit, Missouri

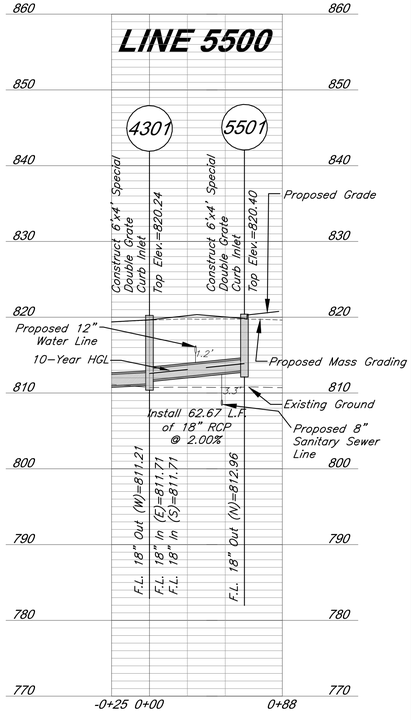
NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing 10/16/2020		











STATE OF MISSOURI
CLINT LOUMASTER
NUMBER PE-2011009651
11/4/2020
REGISTERED PROFESSIONAL ENGINEER

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DATE:	11-4-2020
DESIGN BY:	DJM
DRAWN BY:	CMN
PROJECT NO.:	12720
SHEET NO.	16
TOTAL SHEETS	51

Clint Loumaster
Professional Engineer
License No. PE2011-009651

Street and Storm Sewer Plans

Paragon Parkway

Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing 10/16/2020		

LEGEND

Compacted Fill shall be placed to a minimum of 18 inches above the top of pipe prior to installation.

Connections:

1. Line 4300 Sta 0+00.00 = Line 4100 Sta 1+08.17
2. Line 5500 Sta 0+00.00 = Line 4300 Sta 1+38.15
3. Line 5400 Sta 0+00.00 = Line 4800 Sta 0+70.05

Horizontal Scale: 1" = 50'
Vertical Scale: 1" = 10'
10' 5' 0'
0' 50' 100'

Storm Sewer Profiles

STATE OF MISSOURI
CLINT LOUMASTER
NUMBER PE-2011009651
11/4/2020
REGISTERED PROFESSIONAL ENGINEER

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DATE:	11-4-2020
DESIGN BY:	DJM
DRAWN BY:	CMN
PROJECT NO.:	12720
SHEET NO.:	17
TOTAL SHEETS	51

Clint Loumaster
Professional Engineer
License No. PE2011-009651

Street and Storm Sewer Plans

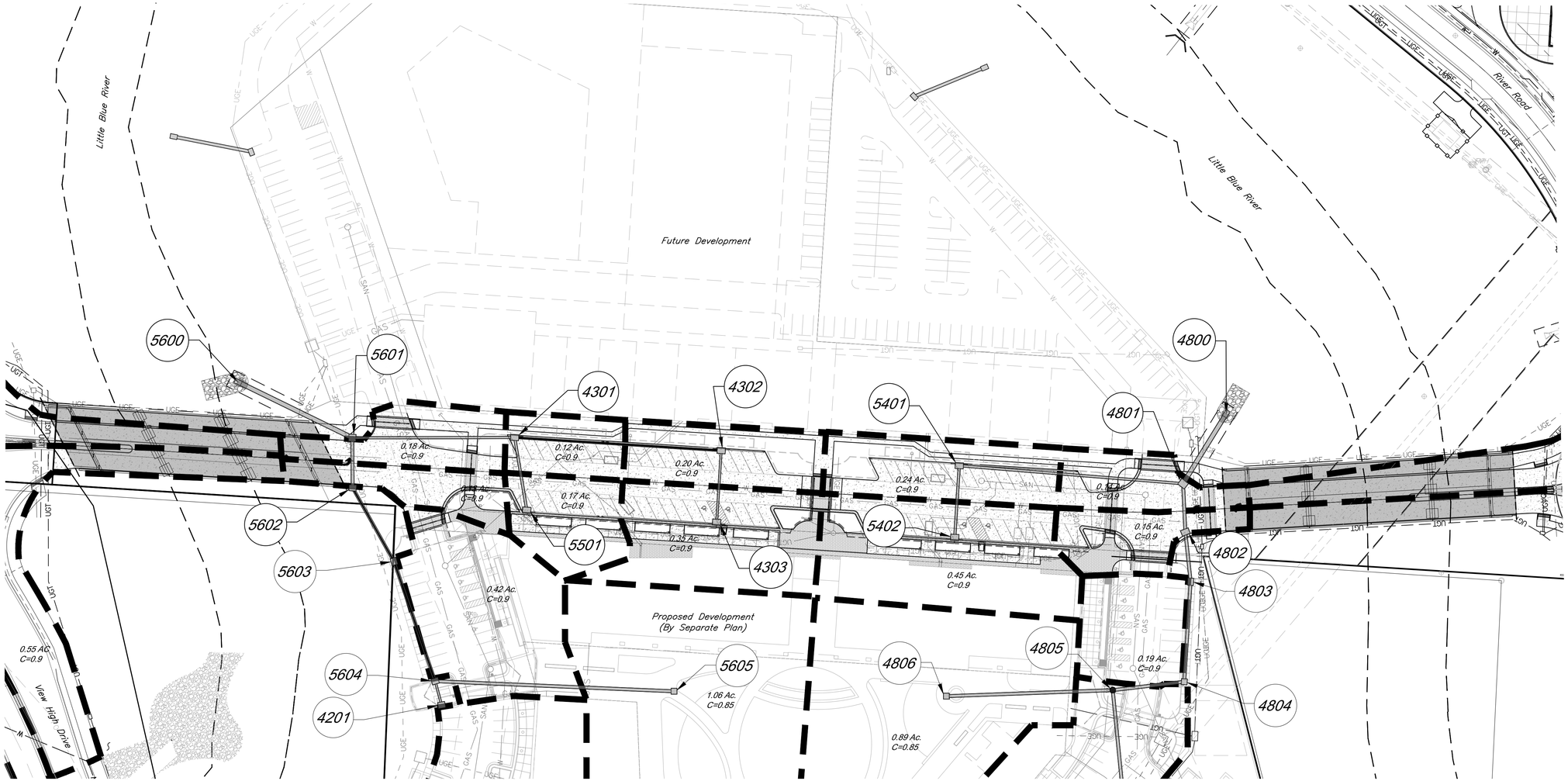
Paragon Parkway

Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing 10/16/2020		

Legend

- 800 — Proposed Contours
- --800-- Existing Contours
- Drainage Area Boundary



Storm Drainage Map

STATE OF MISSOURI
CLINT LOUMASTER
NUMBER PE-2011009651
11/4/2020
REGISTERED PROFESSIONAL ENGINEER

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architects
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DATE:	11-4-2020
DESIGN BY:	DJM
DRAWN BY:	CMN
PROJECT NO.:	12720
SHEET NO.	TOTAL SHEETS
18	51

Clint Loumaster
Professional Engineer
License No. PE2011-009651

Street and Storm Sewer Plans

Paragon Parkway

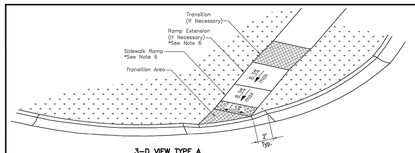
Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing 10/16/2020		

10 Year Storm — Culverts have been designed to the 100 year Storm

	Structures		Runoff Calculations										Pipe Design									Design Checks										
	From	To	Direct Area (acre)	Line In (acre)	Total Area (acre)	C	K	Tc (min)	Flow Time (min)	Intensity (in/hr)	Design Q (cfs)	Description	Pipe length (lin ft)	Pipe Slope Slope, %	Pipe dia (in)	Manning's n Value	Q full (cfs)	Pipe Area, sf	V full fps	Design V fps	Hw/D	outlet head, H	HW, Inlet Control, (ft)	HW, Outlet Control, (ft)	Inlet Top Elevation	upstream flowline	downstream flowline	Invert Drop (ft)	Downstream water elevation	Hydraulic Grade Elev. (Calculated)	Hydraulic Grade (allowable)	Comments
Line 4300	4303		0.35			0.90	1.00	5.00		7.35	2.3	Curb Inlet													820.30					814.82	818.97	
		4302			0.35	0.90	1.00	5.00	0.32	7.35	2.3	RCP	61.05	0.50	15	0.013	4.58	1.23	3.73	3.18	0.8	0.24	814.82	814.44		813.84	813.53		814.20			
	4302		0.20			0.90	1.00	5.00		7.35	1.3	Curb Inlet													820.30			0.5		814.20	818.97	
		4301			0.55	0.90	1.00	5.32	0.72	7.26	3.6	RCP	176.14	0.75	18	0.013	9.12	1.77	5.16	4.08	0.8	0.53	814.20	813.11		813.03	811.71		812.58			
	4301		0.12	0.17		0.90	1.00	5.00		7.35	0.8	Curb Inlet													820.24			0.5		812.58	818.91	
		4101			0.84	0.90	1.00	6.04	0.45	7.05	5.3	RCP	138.15	1.00	18	0.013	10.53	1.77	5.96	5.07	0.9	0.95	812.58	811.53		811.21	809.83		810.58			
Line 4800	4806		0.89			0.85	1.00	5.00		7.35	5.6	Grate Inlet													819.85					815.04	818.52	
		4805			0.89	0.85	1.00	5.00	0.33	7.35	5.6	HDPE	141.67	1.50	24	0.01	36.12	3.14	11.50	7.15	0.7	0.25	815.04	812.93		813.58	811.45		812.69			
	4805		0.00	0.67		0.90	1.00	5.00		7.35	0.0	Curb Inlet													819.30			0.5		812.69	817.97	
		4804			1.56	0.87	1.00	5.33	0.15	7.25	9.9	RCP	61.28	1.50	24	0.013	27.78	3.14	8.84	6.78	0.9	0.44	812.69	811.81		810.95	810.04		811.37			
	4804		0.19			0.90	1.00	5.00		7.35	1.3	Curb Inlet													819.06			0.5		811.37	817.73	
		4803			1.75	0.87	1.00	5.48	0.16	7.21	11.0	HDPE	85.31	1.64	24	0.01	37.76	3.14	12.02	8.77	0.9	0.68	811.37	810.14		809.54	808.14		809.46			
	4803		0.00			0.90	1.00	5.00		7.35	0.0	Curb Inlet													819.32			0.5		809.46	817.99	
		4802			1.75	0.87	1.00	5.64	0.10	7.16	11.0	HDPE	42.44	1.00	24	0.01	29.49	3.14	9.39	7.29	0.9	0.45	809.46	809.07		807.64	807.21		808.62			
	4802		0.15			0.90	1.00	5.00		7.35	1.0	Curb Inlet													819.57			0.5		808.62	818.24	
		4801			1.90	0.88	1.00	5.74	0.11	7.13	11.9	RCP	41.20	1.00	24	0.013	22.68	3.14	7.22	6.21	1.0	0.52	808.62	807.46		806.71	806.30		806.94			
	4801		0.14	0.69		0.90	1.00	5.00		7.35	0.9	Curb Inlet													819.57			1.6		806.94	818.24	
		4800			2.73	0.88	1.00	5.85	0.17	7.10	17.1	RCP	70.01	1.00	36	0.013	66.88	7.07	9.46	6.69	0.7	0.21	806.94	805.71		804.70	804.00		805.50			
Line 5400	5402		0.45			0.90	1.00	5.00		7.35	3.0	Curb Inlet													820.30					814.45	818.97	
		5401			0.45	0.90	1.00	5.00	0.30	7.35	3.0	RCP	61.05	0.50	18	0.013	7.45	1.77	4.21	3.35	0.7	0.16	814.45	813.95		813.33	813.03		813.79			
	5401		0.24			0.90	1.00	5.00		7.35	1.6	Curb Inlet													820.30			0.5		813.79	818.97	
		4801			0.69	0.90	1.00	5.30	0.57	7.26	4.5	RCP	191.09	1.50	18	0.013	12.90	1.77	7.30	5.57	0.8	0.90	813.79	811.31		812.53	809.66		810.41			
Line 5500	5501		0.17			0.90	1.00	5.00		7.35	1.1	Curb Inlet													820.40					813.98	819.07	
		4301			0.17	0.90	1.00	5.00	0.25	7.35	1.1	RCP	62.67	2.00	18	0.013	14.90	1.77	8.43	4.13	0.7	0.02	813.98	812.48		812.96	811.71		812.46			
Line 5600	5605		1.06			0.85	1.00	5.00		7.35	6.6	Grate Inlet													819.85					812.79	818.52	
		5604			1.06	0.85	1.00	5.00	0.83	7.35	6.6	RCP	203.44	0.50	24	0.013	16.04	3.14	5.11	4.09	0.8	0.47	812.79	811.90		811.27	810.25		811.43			
	5604		0.23	0.19		0.90	1.00	5.00		7.35	1.5	Curb Inlet													818.90			0.5		811.43	817.57	
		5603			1.48	0.86	1.00	5.83	0.22	7.11	9.1	HDPE	107.61	1.50	24	0.01	36.12	3.14	11.50	8.08	0.8	0.54	811.43	809.94		809.75	808.14		809.40			
	5603		0.18			0.90	1.00	5.00		7.35	1.2	Curb Inlet													819.15			0.5		809.40	817.82	
		5602			1.66	0.87	1.00	6.05	0.14	7.04	10.1	HDPE	71.85	1.50	24	0.01	36.12	3.14	11.50	8.31	0.9	0.51	809.40	808.40		807.64	806.56		807.88			
	5602		0.13			0.90	1.00	5.00		7.35	0.9	Curb Inlet													819.02			0.5		807.88	817.69	
		5601			1.79	0.87	1.00	6.19	0.10	7.00	10.9	RCP	42.61	1.50	24	0.013	27.78	3.14	8.84	6.98	0.9	0.44	807.88	800.85		806.06	805.42		800.41			
	5601		0.18	0.84		0.90	1.00	5.00		7.35	1.2	Curb Inlet													819.02			7.26		800.41	817.69	
		5600			2.81	0.88	1.00	6.30	0.21	6.97	17.3	RCP	108.17	2.00	36	0.013	94.58	7.07	13.38	8.64	0.7	0.27	800.41	797.77		798.16	796.00		797.50			

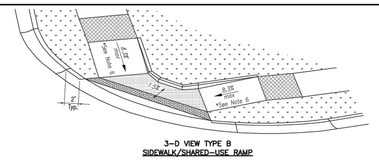
Storm Drainage Calculations



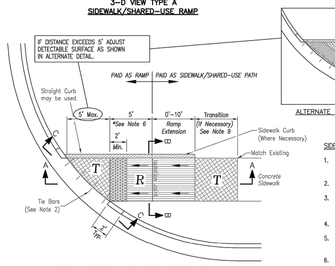
3-D VIEW TYPE A
SIDEWALK/SHARED-USE RAMP

LEGEND

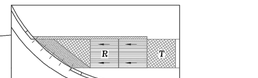
R	SIDEWALK RAMP
TS	TURNING SPACE
	DETECTABLE WARNING SURFACE
T	TRANSITION



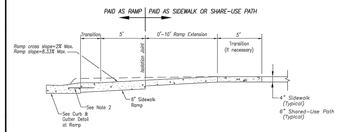
3-D VIEW TYPE B
SIDEWALK/SHARED-USE RAMP



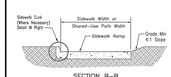
TYPE A SIDEWALK/SHARED-USE RAMP
Not to Scale



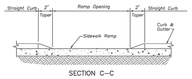
ALTERNATE DETECTABLE SURFACE LAYOUT



SECTION A-A

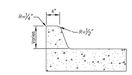


SECTION B-B

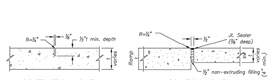


SECTION C-C

TYPE A & B SIDEWALK RAMP
Not to Scale



SIDEWALK CURB DETAIL
Not to Scale

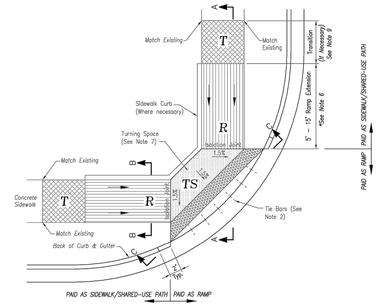


CONTRACTION JOINT

ISOLATION JOINT

JOINT DETAILS
Not to Scale

CURB & GUTTER DETAIL AT RAMP
Not to Scale



TYPE B SIDEWALK/SHARED-USE RAMP
Not to Scale

SIDEWALK/SHARED-USE PATH & SIDEWALK/SHARED-USE RAMP NOTES:

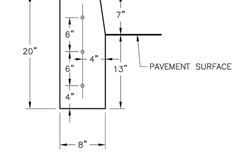
1. CURB RAMP OPENING, NOT INCLUDING FLARES, SHALL MATCH EXISTING SIDEWALK WIDTH AND OPENING SHALL BE AT LEAST 48" WIDE.
2. USE 18" LONG #4 EPOXY COATED TIE BARS @ 24" O.C. EMBED TIE BARS 9" IN EACH DIRECTION.
3. ALL RAMPS, SIDEWALKS, SHARED-USE PATHS SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
4. LONGITUDINAL JOINT SPACING TO MATCH WIDTH OF SIDEWALK.
5. ISOLATION JOINTS SHALL BE PLACED WHERE WALK ABUTS DRIVEWAYS AND SIMILAR LOCATIONS, AND 150' CENTERS MAX.
6. ADA MAXIMUM RAMP SLOPE = 8.33%
   ADA MAXIMUM CROSS SLOPE = 2.0%
   *ROADWAY EXCEPTION: WHERE EXISTING ROAD PROFILE GRADE DOES NOT ALLOW RAMP TO MEET RAMP SLOPE REQUIREMENT OF 8.33% OR LESS, THE RAMP SHALL BE EXTENDED TO A LENGTH OF 15 FEET TO MATCH EXISTING SIDEWALK. CROSS SLOPE OF RAMP SHALL BE 1.5%, ±0.5%.
7. TURNING SPACES SHALL BE 1.5%, ±0.5%, SLOPE IN ANY DIRECTION. TURNING SPACES SHALL HAVE A MINIMUM 4'x4' TURNING AREA. TURNING SPACES, WITH A SIDEWALK CURB, SHALL HAVE A 5' TURNING AREA PERPENDICULAR TO THE SIDEWALK CURB.
8. FOR RETROFIT WORK, SLOPES TO BE DETERMINED IN FIELD BY CONTRACTOR AND APPROVED BY CITY INSPECTOR
9. RAMP EXTENSION AREA SHALL NOT BE USED AS TRANSITION TO EXISTING SIDEWALK. ANY TRANSITIONS REQUIRED TO MATCH RAMPS TO EXISTING SIDEWALK SHALL REQUIRE REMOVAL AND REPLACEMENT OF ADDITIONAL SIDEWALK BEYOND THE RAMP AREA. SIDEWALK TRANSITION LENGTH SHALL BE EQUAL TO OR GREATER THAN THE WIDTH OF THE EXISTING SIDEWALK. RAMP EXTENSIONS SHALL BE A CONTINUOUS SLOPE.
10. ALL SIDEWALK AND RAMP CONSTRUCTION SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

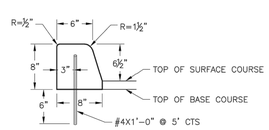
STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: ADA RAMP RETROFIT DETAIL

Drawn By: MJF
Checked By: DL
Date: 04/17
Proj. #:

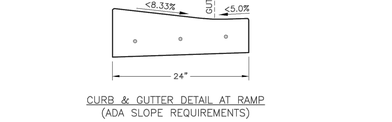
GEN-3A



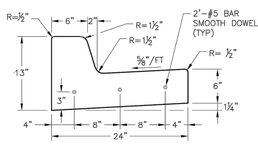
STRAIGHT CURB
(TYPE C-1)



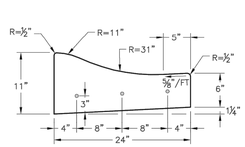
DOWELLED CURB
(TYPE DC)



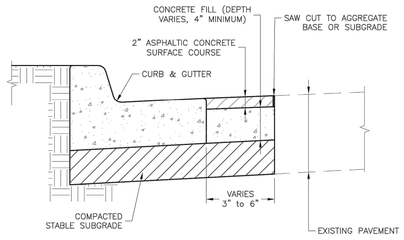
CURB & GUTTER DETAIL AT RAMP
(ADA SLOPE REQUIREMENTS)



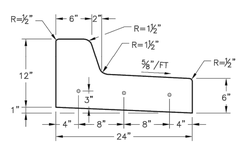
STRAIGHT BACK CURB & GUTTER
(TYPE CG-1)



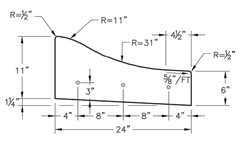
ROLL BACK CURB & GUTTER
(TYPE CG-2)



CURB REPLACEMENT DETAIL



STRAIGHT BACK DRY CURB & GUTTER
(TYPE CG-1 DRY)



ROLL BACK DRY CURB & GUTTER
(TYPE CG-2 DRY)

GENERAL NOTES

1. ¾" ISOLATION JOINTS WITH 3 (2'-#5 BAR) SMOOTH DOWELS SHALL BE PLACED AT RADIUS POINTS AND AT 150' INTERVALS. THESE DOWEL BARS SHALL BE GREASED AND WRAPPED ON ONE END WITH EXPANSION TUBES.
2. 3" DEEP CONTRACTION JOINTS SHALL BE INSTALLED AT APROXIMATELY 10' INTERVALS. THESE JOINTS SHALL PASS ACROSS THE ENTIRE CURB SECTION.
3. CONCRETE FILL SHALL HAVE UNIFORM AND SMOOTH FINISH
4. KCMMB 4K CONCRETE SHALL BE USED FOR ALL CURB.
5. ASPHALTIC CONCRETE SURFACE COURSE SHALL CONFORM TO STANDARD SPECIFICATIONS SECTION 2205.2.
6. CURBS FOR NEW STREETS SHALL BE BUILT ON ASPHALT OR AGGREGATE BASE AS SHOWN IN TYPICAL SECTION DETAIL.
7. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

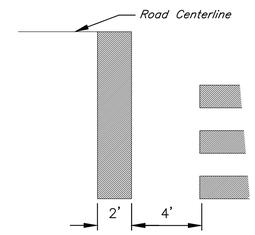
STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: CURB & GUTTER DETAIL

Drawn By: MJF
Checked By: DL
Date: 04/17
Proj. #:

GEN-4

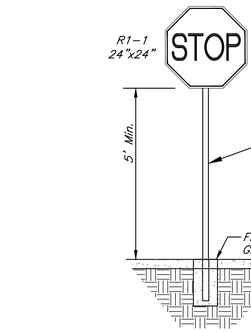
	Section A-A	Section B-B		Section C-C
Ramp ID	Ramp Extension (FT)	Ramp Width (FT)	Sidewalk Curb	Ramp Opening (FT)
1	0	8	Yes	8.13
2	0	8	Yes	8.7
3	0	8	Yes	8
4	0	8	Yes	8.1
5	0	8	Yes	8
6	0	8	Yes	8
7	0	4	No	4
8	0	4	No	4
9	0	8	Yes	8.1
10	0	8	Yes	8.1
11	0	8	Yes	8
12	0	8	Yes	8.53
13	0	8	Yes	8.12
14	0	8	Yes	8
15	0	8	Yes	8
16	0	8	Yes	8
17	0	10	Yes	10
18	N/A	10.25	Yes	10.25
19	N/A	10.1	Yes	10.1
20	0	10	Yes	10

Note: Ramp ID Shown on Sheets 9 and 10.



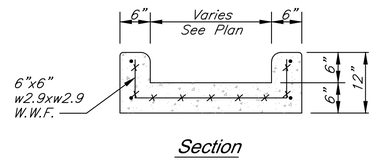
STOP BAR MARKING DETAIL

N.T.S.



STOP SIGN DETAIL

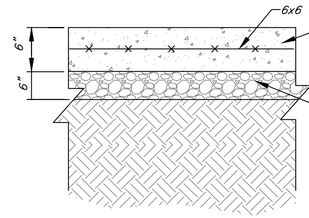
Not to Scale



Section

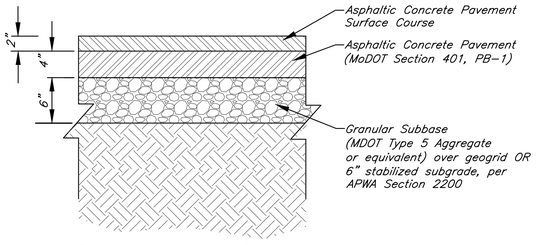
CONCRETE FLUME

Not To Scale



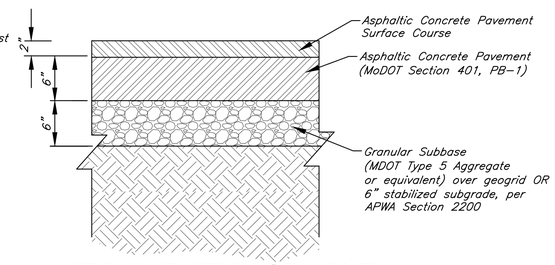
CONCRETE PAVEMENT SECTION

Not To Scale



LIGHT DUTY ASPHALT PAVEMENT SECTION

Not To Scale



HEAVY DUTY ASPHALT PAVEMENT SECTION

Not To Scale

Pavement Notes:

1. *Pavement sections from geotechnical report title "Geotechnical Engineering Report – Soccer Fields", dated July 27, 2016, prepared by Terracon Consultants, Inc.*
2. *All pavement shall meet City of Lee's Summit UDO Section 8.620 requirements.*
3. *Asphalt mix shall be APWA*
   Base: 1-01, 2-01 or 5-01
   Surface: 2-01, 3-01 or 5-01
4. *Subgrade stabilization shall be per Lee's Summit Standard Specifications – APWA Section 2200.*

STATE OF MISSOURI
CLINT LOUMASTER
NUMBER PE-2011009651
11/4/2020
REGISTERED PROFESSIONAL ENGINEER

GBA architects engineers
9801 Renner Boulevard
Lenexa, Kansas 66219
913.492.0400
www.gbateam.com

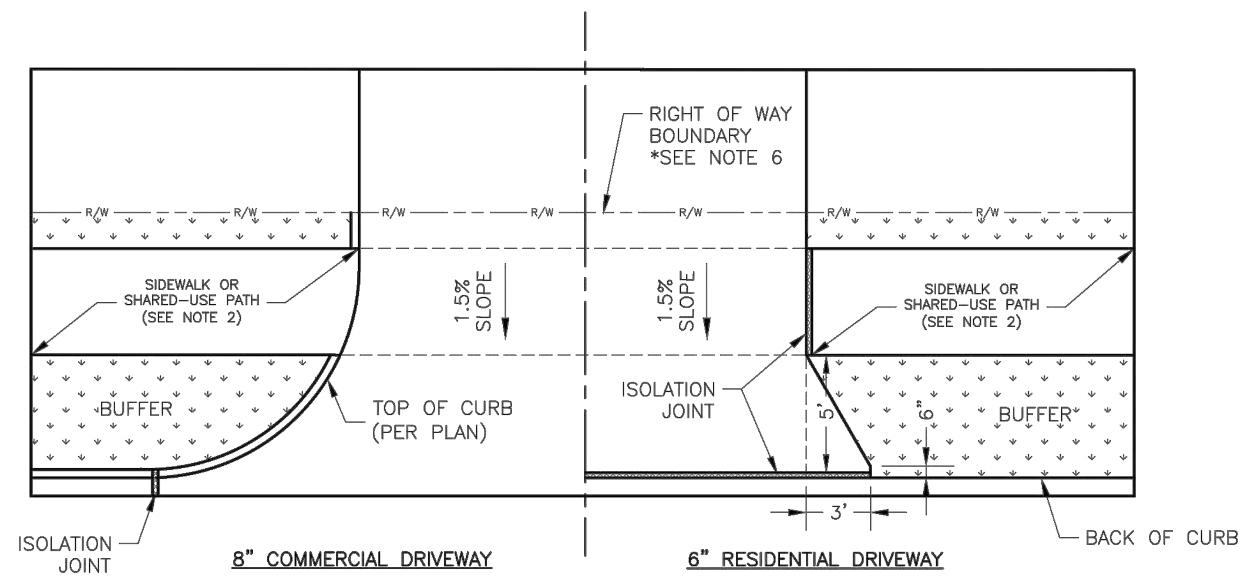
DATE:	11-4-2020
DESIGN BY:	DJM
DRAWN BY:	CMN
PROJECT NO.:	12720
SHEET NO.:	19
TOTAL SHEETS	51

Clint Loumaster
Professional Engineer
License No. PE2011-009651

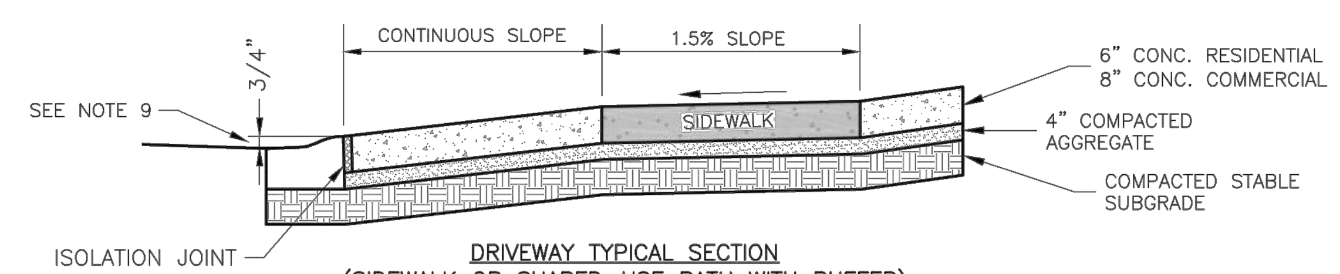
Street and Storm Sewer Plans
Paragon Parkway
Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing 10/16/2020		

Construction Details



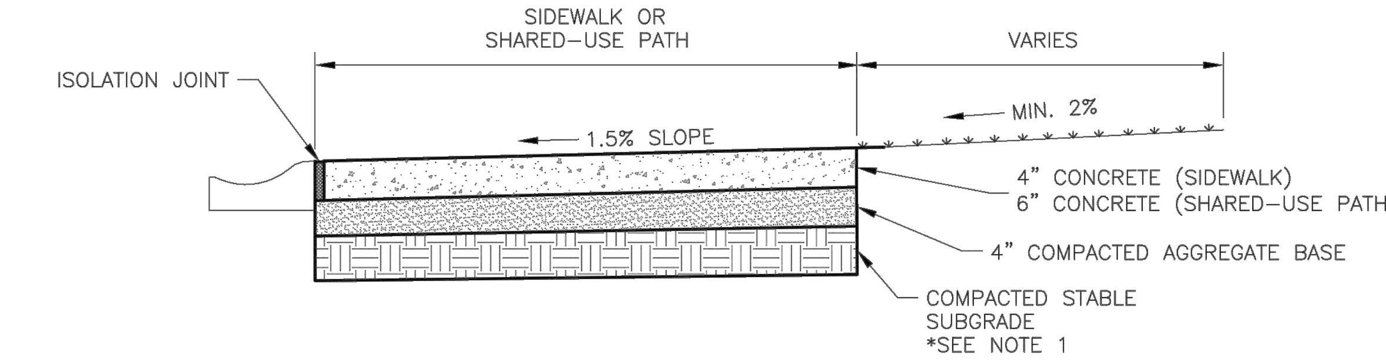
DRIVEWAY WITH BUFFER
NOT TO SCALE



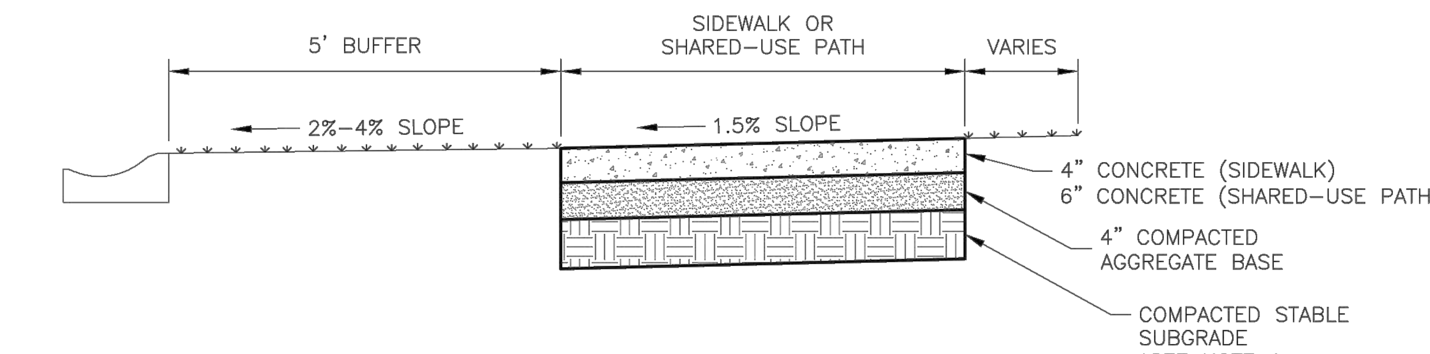
DRIVEWAY TYPICAL SECTION
(SIDEWALK OR SHARED-USE PATH WITH BUFFER)
NOT TO SCALE

GENERAL NOTES
1. SUBGRADE SHALL BE STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
2. ALL DRIVE APPROACHES SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG) FOR SLOPE REQUIREMENTS WHEN SIDEWALK IS REQUIRED (SEE ADA RAMP RETROFIT DETAIL GEN-3B, SIDEWALK/SHARED USE PATH RAMP AT DRIVEWAY DETAIL).
3. JOINT AT BACK OF CURB LINE SHALL BE AN ISOLATION JOINT FOR RESIDENTIAL DRIVEWAYS.
4. KCMMB 4K CONCRETE MIX IS REQUIRED FOR ALL CURBS.
5. COMMERCIAL DRIVEWAYS, IN THE PUBLIC RIGHT OF WAY, SHALL BE KCMMB 4K CONCRETE MIX.
6. RESIDENTIAL DRIVEWAYS, IN THE PUBLIC RIGHT OF WAY, KCMMB 4K CONCRETE MIX IS RECOMMENDED. OTHER CONCRETE MIXES NEEDS TO BE APPROVED BY CITY INSPECTOR.
7. A JOINT MUST BE INSTALLED AT THE RIGHT OF WAY BOUNDARY FOR PROPERTY DELINEATION.
8. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.
9. ¾" FROM TOP OF CURB TO FLOWLINE AT DRIVEWAY (TYPE CG-1 CURB ONLY). MUST MAINTAIN ORIGINAL FLOWLINE OF CURB.
10. SIDEWALK ADJOINING CURB SHALL BE 6" THICK, EXTENDING 3' FROM THE DRIVEWAY.
11. THE MAXIMUM WIDTH OF A RESIDENTIAL DRIVEWAY IS 36 FEET WITHIN THE RIGHT OF WAY.

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063
STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
DRIVEWAY DETAIL
Drawn By: MJF
Checked By: DL
Date: 04/17
GEN-1



SIDEWALK/SHARED-USE PATH WITHOUT BUFFER
NOT TO SCALE



SIDEWALK/SHARED-USE PATH WITH BUFFER
NOT TO SCALE

GENERAL NOTES:
1. SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
2. 1.5% CROSS SLOPE MUST BE MAINTAINED THROUGH DRIVEWAYS.
3. KCMMB 4K CONCRETE MIX SHALL BE REQUIRED FOR ALL SIDEWALKS/SHARED-USE PATHS OR AS APPROVED BY THE CITY INSPECTOR.
4. ALL SIDEWALK/SHARED-USE PATHS SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).
5. AN ISOLATION JOINT SHALL BE PLACED AT A MAXIMUM OF 150 FT. CONSTRUCTION JOINTS SHALL BE PLACED THE SAME WIDTH OF SIDEWALK/SHARED-USE PATHS, BUT NO GREATER THAN 10 FT.
6. AN ISOLATION JOINT SHALL BE PLACED WHERE THE SIDEWALK/SHARED-USE PATHS MEETS A RESIDENTIAL DRIVEWAY.
7. SHARED-USE PATHS WIDTH SHALL BE 10 FT. WIDE.
8. SIDEWALK/SHARED-USE PATHS FINISHING SHALL BE FULL BROOM FINISH OR AS DIRECTED BY CITY INSPECTOR.
9. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063
SIDEWALK/SHARED-USE PATH DETAIL
Date: 04/17
Drawn By: MJF
Checked By: DL
GEN-2

STATE OF MISSOURI
CLINT LOUMASTER
NUMBER PE-2011009651
11/4/2020
REGISTERED PROFESSIONAL ENGINEER

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9801 Renner Boulevard
Lenexa, Kansas 66219
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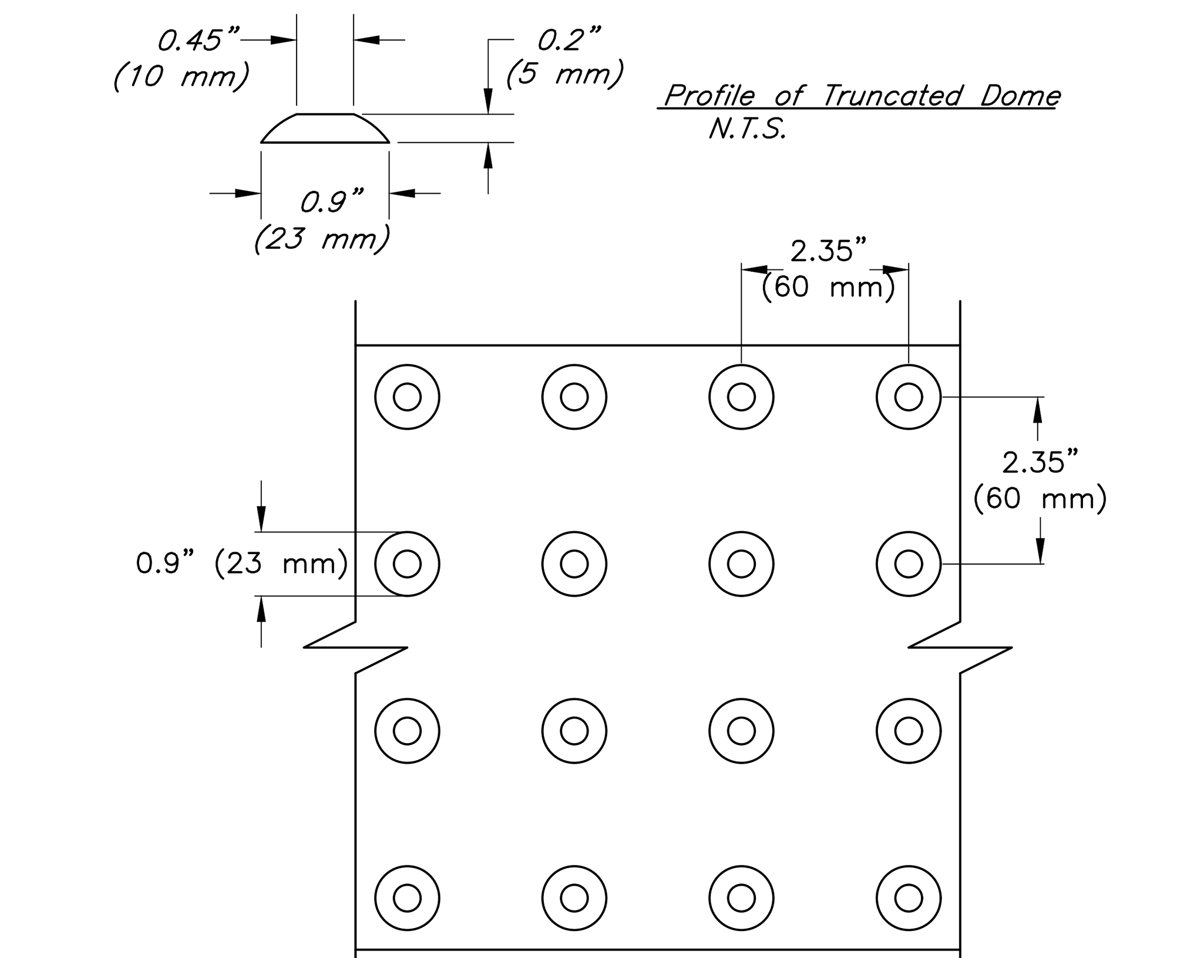
Clint Loumaster
Professional Engineer
License No. PE2011-009651

DATE:	11-4-2020
DESIGN BY:	DJM
DRAWN BY:	CMN
PROJECT NO.:	12720
SHEET NO.	20
TOTAL SHEETS	51

Street and Storm Sewer Plans
Paragon Parkway
Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing 10/16/2020		



Plan View
N.T.S.

Detectable Warnings:

1. Curb ramps shall have detectable warnings extending the full length and width of the curb ramp.
2. Detectable warnings shall consist of raised truncated domes with a diameter of nominal 0.9 in (23 mm), a height of nominal 0.2 in (5 mm) and a center-to-center spacing of nominal 2.35 in (60 mm) and shall contrast visually with adjoining surfaces, either light-on-dark, or dark-on-light.

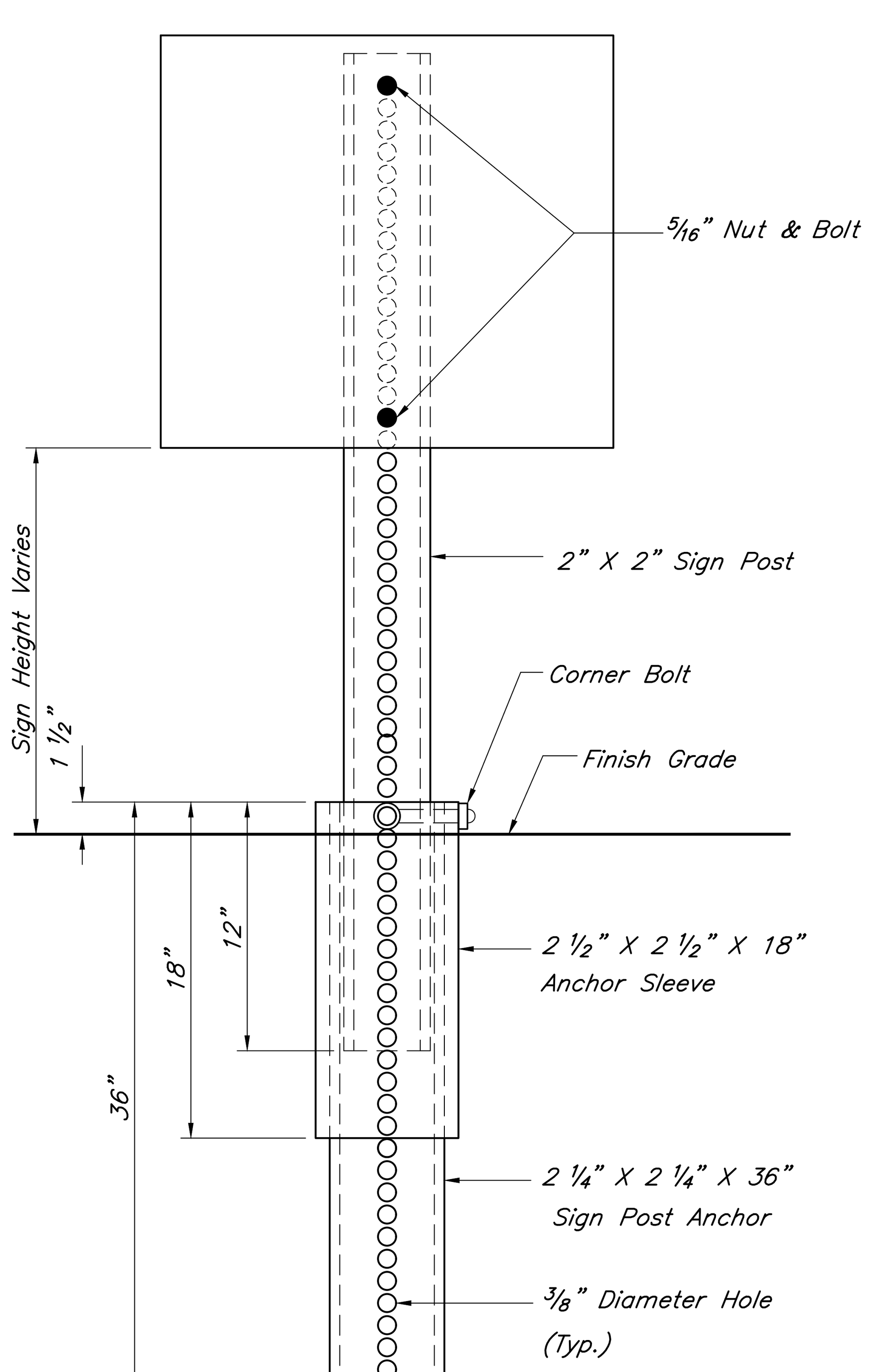
   The material used to provide contrast shall be an integral part of the walking surface and should contrast by at least 70%. Contrast in percent is determined by:

   $$\text{Contrast} = [(B1 - B2)/B1] \times 100$$

   where B1 = light reflectance value (LRV) of the lighter area and B2 = light reflectance value (LRV) of the darker area.

   Note that in any application both white and black are never absolute; thus, B1 never equals 100 and B2 is always greater than 0.
3. If a walk crosses or adjoins a vehicular way, and the walking surfaces are not separated by curbs, railings, or other elements between the pedestrian areas and vehicular areas, the boundary between the areas shall be defined by a continuous detectable warning which is 36 in (915 mm) wide.
4. Contractor shall install Detectable Warnings in compliance with current ADA standards.

DETECTABLE WARNINGS
N.T.S.



Pavement Installation Sequence
1. Sign post anchor driven into subgrade prior to the placement of the pavement.
2. Anchor sleeve driven into subgrade over the sign post anchor prior to the placement of the pavement.
3. Insert sign post into the sign post anchor and bolt in place.

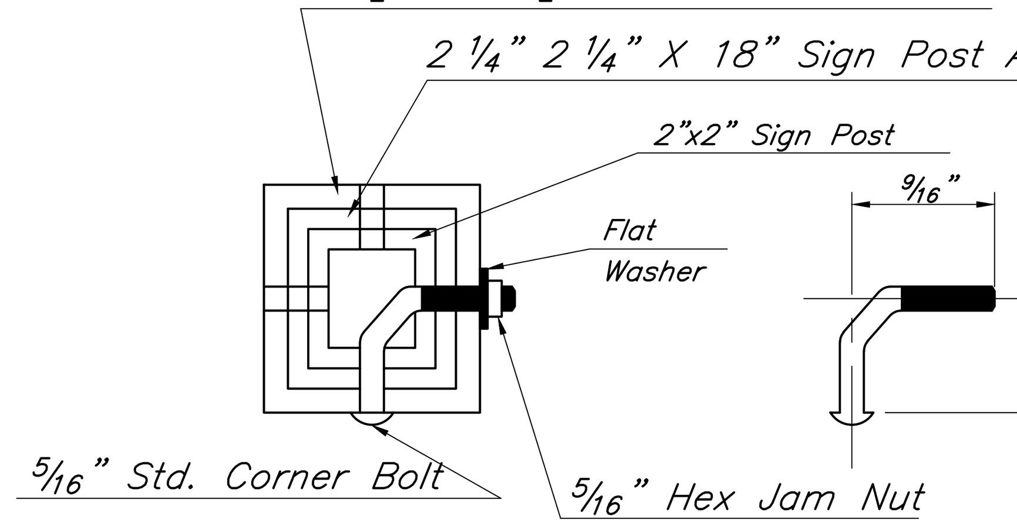
Ground Installation Sequence
1. Sign post anchor driven into the ground.
2. Anchor sleeve driven into the ground over the sign post anchor.
3. Insert sign post into the sign post anchor and bolt in place.

Note:
In all installations the first hole above the finished grade level in all three units must be in line for insertion of the corner bolt.

All corner bolts and nuts for fastening the signs and sign post assembly shall comply the applicable ANSI standards and ASTM testing requirements and shall be subsidiary items.

All Components shall be galvanized.

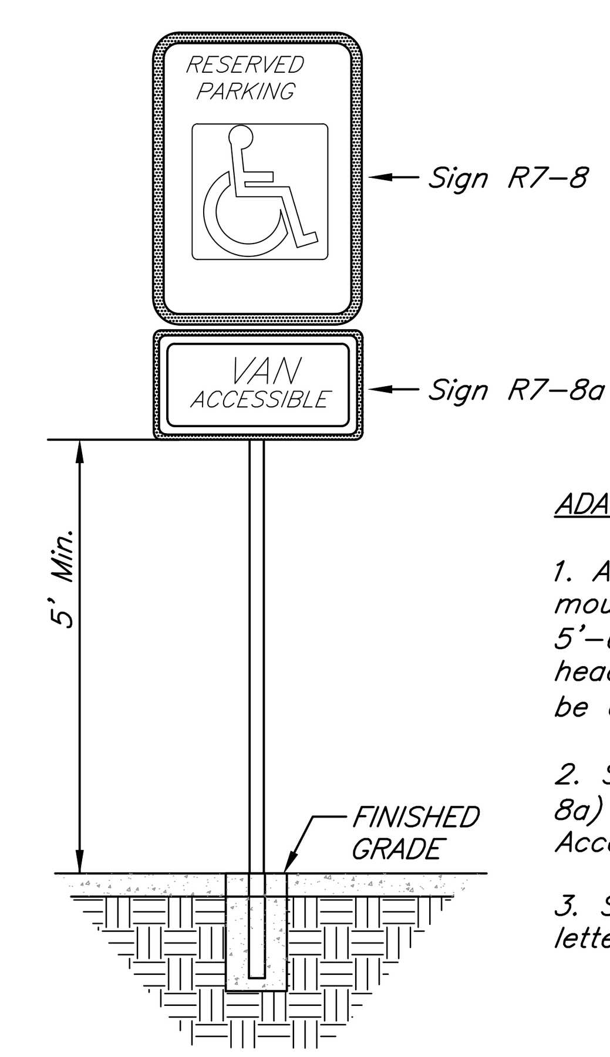
Sign Notes:
1. All letter, number & symbol sizes, spacing & colors, and the sign colors shall conform to the current "Manual On Uniform Traffic Control Devices."
2. Sign blank material shall be as follows:
   Signs 36"X36" or greater 0.100" thick
   Guide Signs 0.125" thick
   All other signs 0.080" thick
3. All sign mounting hardware shall be galvanized.
4. All sign faces shall be fabricated using ASTM Type III Prismatic reflective sheeting.



SECTION A-A

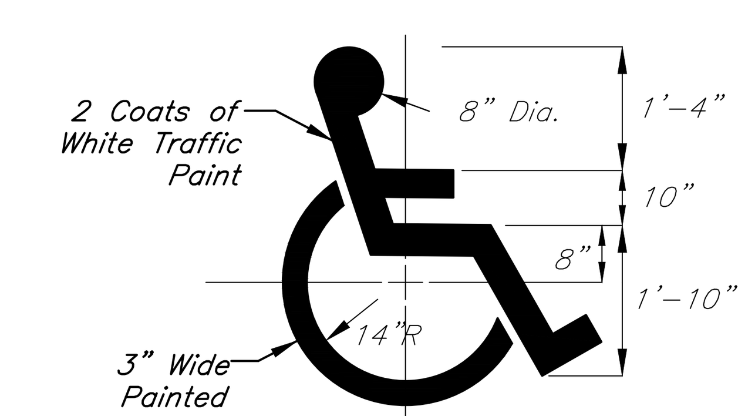
5/16" CORNER BOLT DETAIL
(all bolts)

BREAK-AWAY SIGN POST DETAIL
Not to Scale

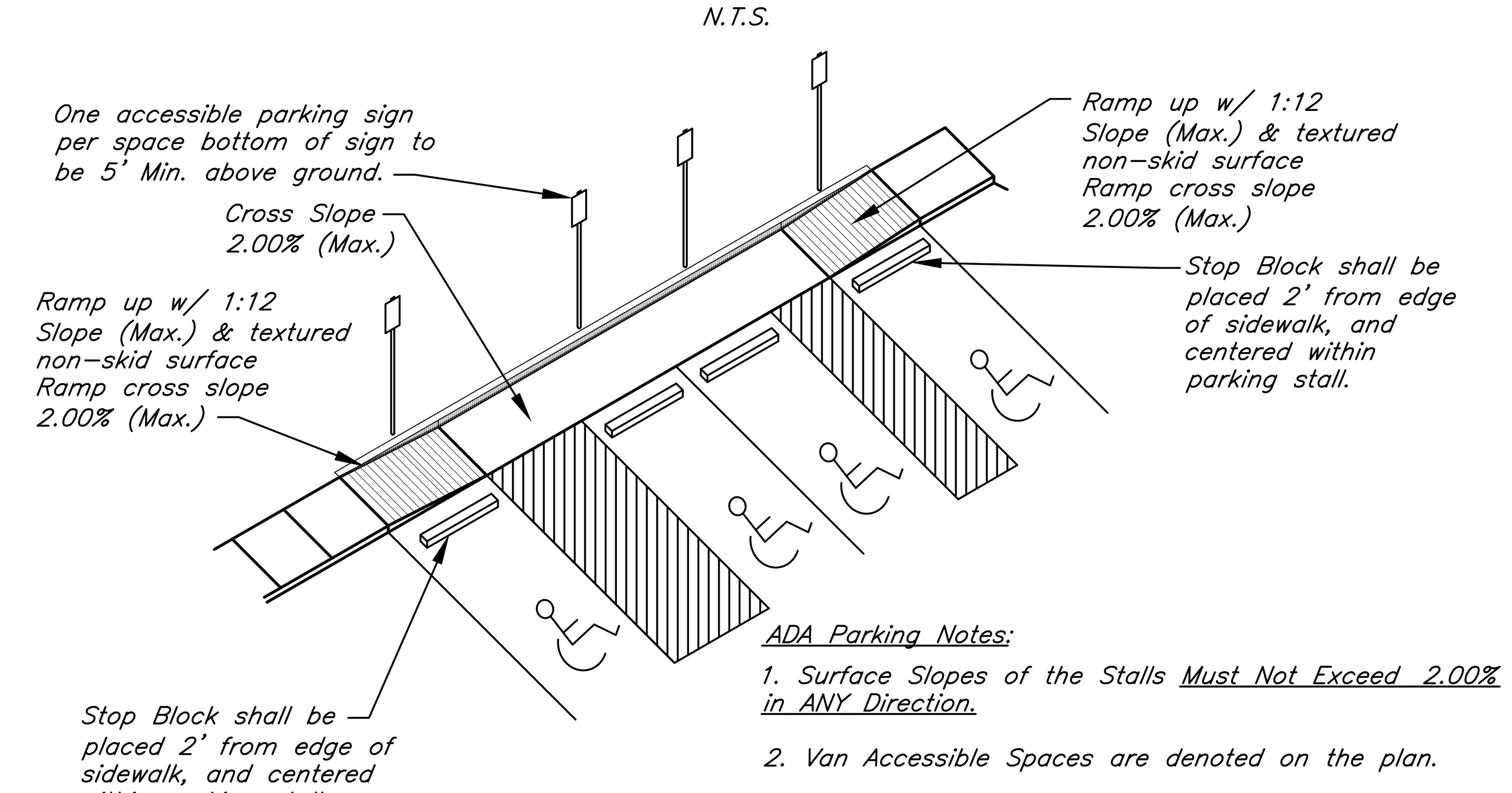


ADA Sign Notes:
1. Accessible Sign (R7-8) Shall be mounted on a pole or other structure 5'-6" above the parking surface, at the head of the parking space, and shall be at least 12"x18" in area.
2. Supplemental Accessible Sign (R7-8a) shall be used on all required Van Accessible Spaces.
3. Signs shall be blue with white lettering.

TYPICAL ACCESSIBLE SIGNAGE
Not to Scale



ACCESSIBLE PARKING SYMBOL DETAIL
Not to Scale



ADA Parking Notes:
1. Surface Slopes of the Stalls Must Not Exceed 2.00% in ANY Direction.
2. Van Accessible Spaces are denoted on the plan.
3. Parking Blocks shall be placed 24" from edge of sidewalk to center line of parking block.

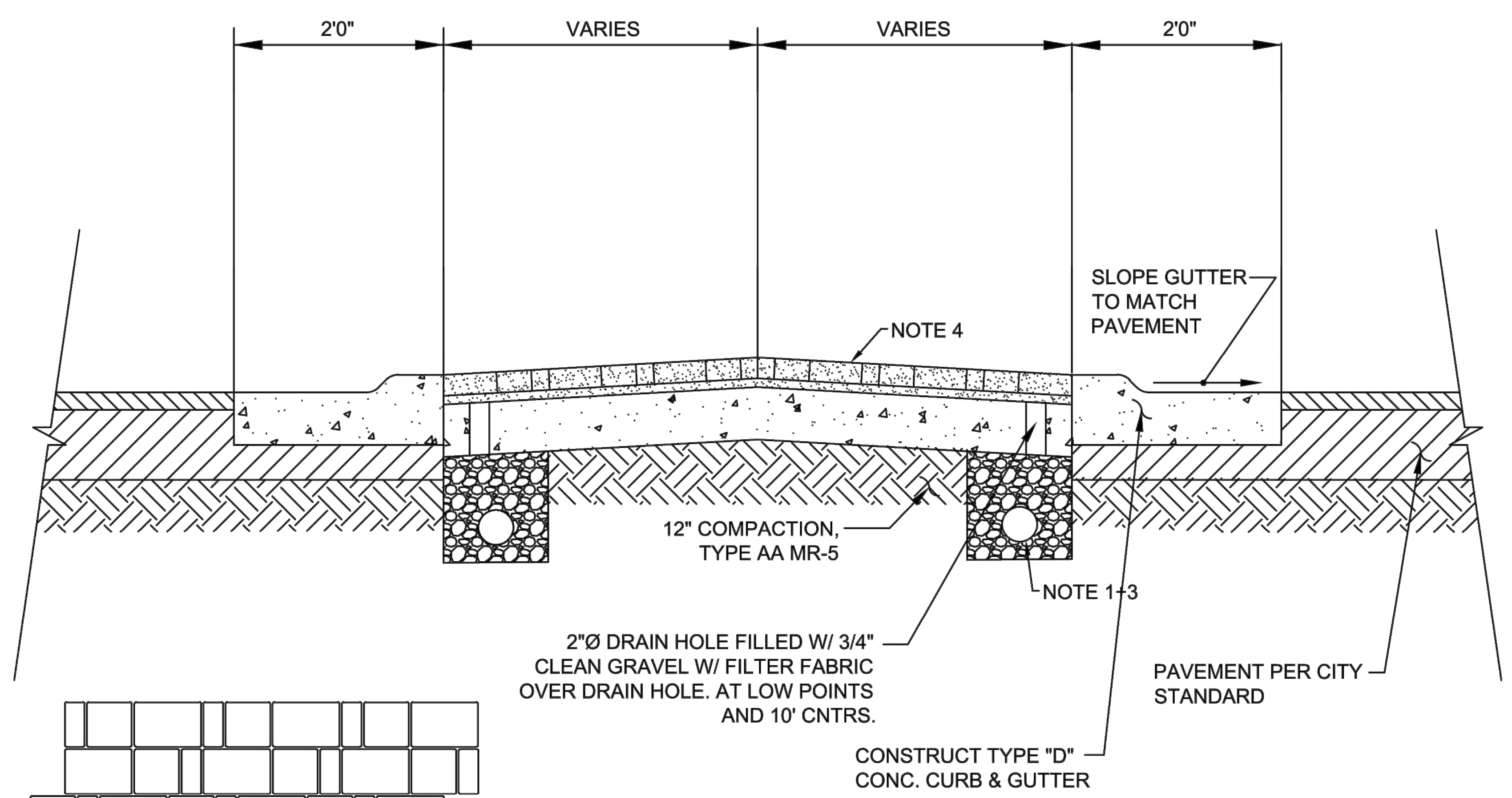
ADA PARKING DETAIL
Not to Scale

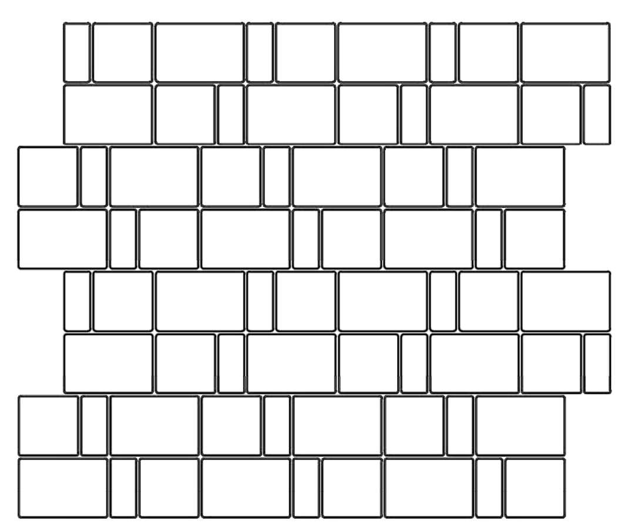
Construction Details

G:\12720\Civil 3D\Production Drawings\Street & Storm Plans - Paragon Parkway\12720C2100.dwg Layout: 20 Construction Details -- Wednesday November 04, 2020, 3:25pm -- Copyright 2020, Professional Engineer 000133, Landscape Architect 000025, Professional Land Surveyor 000059

STATE OF MISSOURI — CLINT LOUMASTER — NUMBER PE-2011009651 — REGISTERED PROFESSIONAL ENGINEER — 11/4/2020	**GBA** architects engineers 9801 Renner Boulevard Lenexa, Kansas 66219 913.492.0400 www.gbateam.com	DATE: 11-4-2020 DESIGN BY: DJM DRAWN BY: CMN PROJECT NO.: 12720 SHEET NO. 21 — TOTAL SHEETS 51
Clint Loumaster Professional Engineer License No. PE2011-009651	Street and Storm Sewer Plans **Paragon Parkway** Lee's Summit, Missouri	

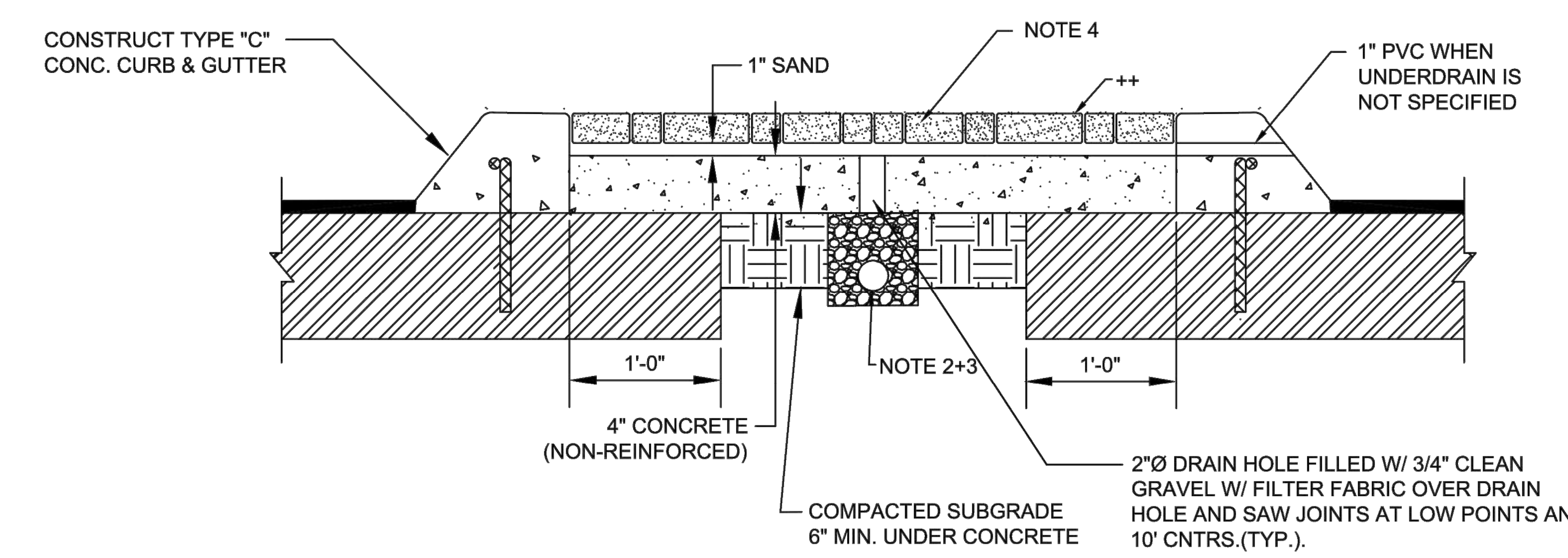
NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing 10/16/2020		





++ PAVING PATTERN
NO SCALE

MOUNTABLE MEDIAN PAVER DETAIL



SECTION
NO SCALE

MEDIAN PAVER DETAIL

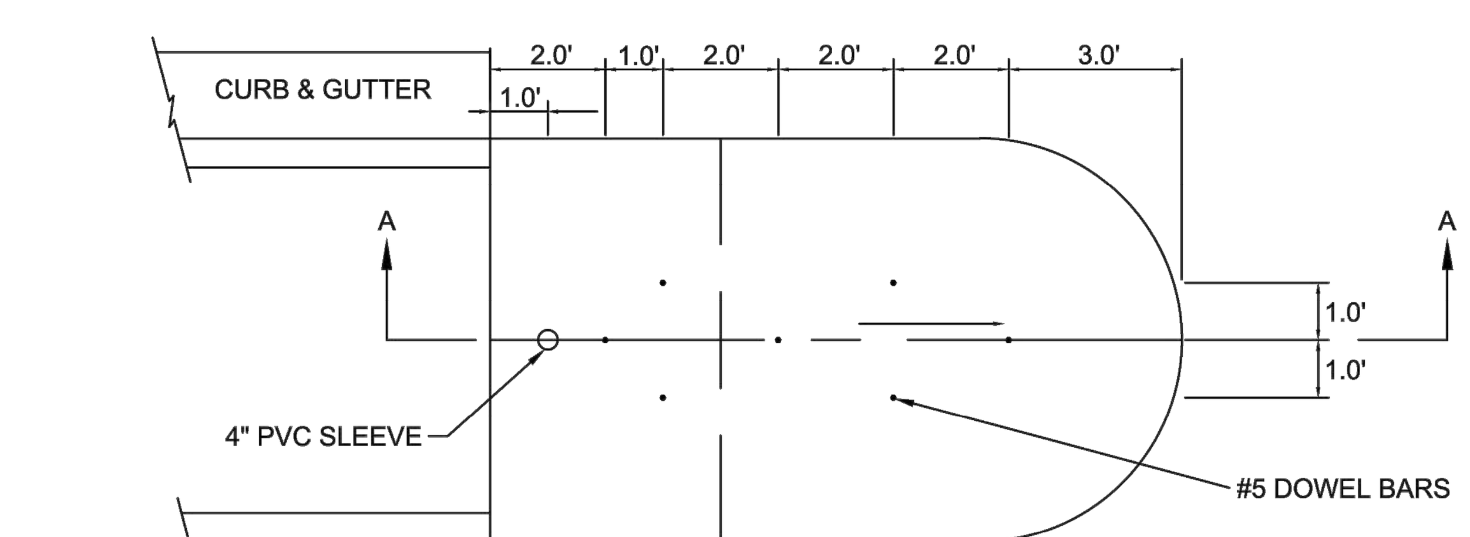
NOTES:

1. UNDERDRAIN SHALL BE INSTALLED AROUND THE PERIMETER OF THE MEDIAN AND CONNECTED TO THE STORM DRAIN SYSTEM.

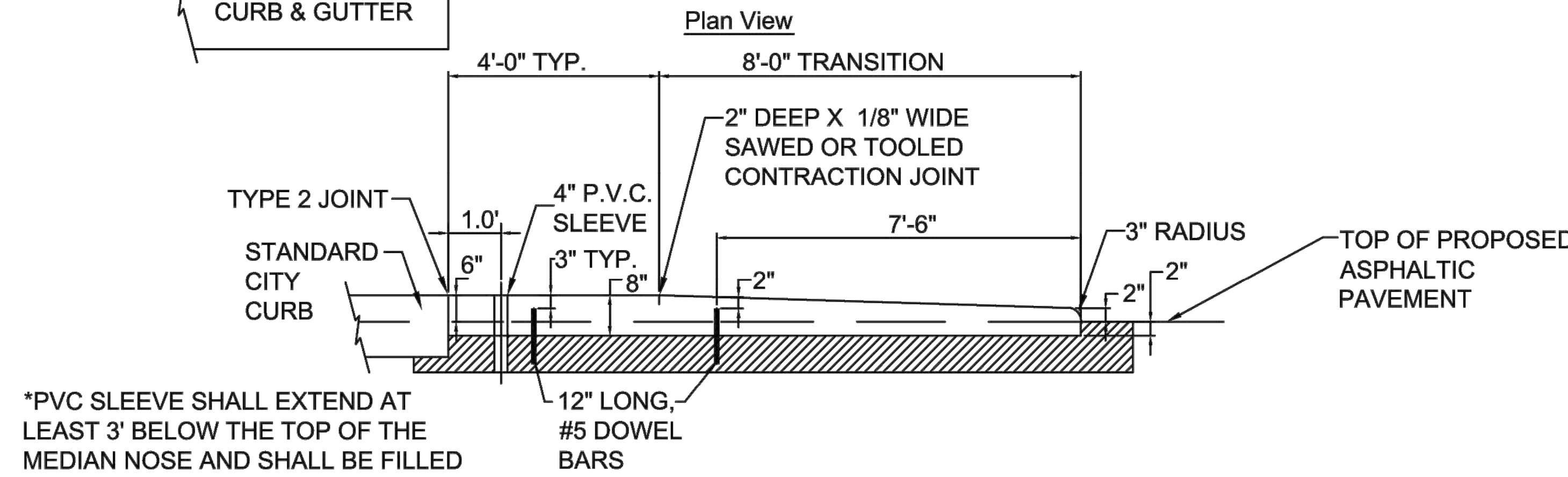
2. UNDERDRAIN SHALL BE INSTALLED TO THE CENTER OF THE MEDIAN AND CONNECTED TO THE STORM DRAIN SYSTEM.

3. CONCRETE PAVERS, PAVESTONE "COBBLE STONE" OR EQUAL
4-9/16"x2-1/4"x2-3/8"
4-9/16"x4-9/16"x2-3/8"
4-9/16"x6-13/16"x2-3/8"

PAVER COLOR
VARIABLE. CONTACT ENGINEERING



Plan View

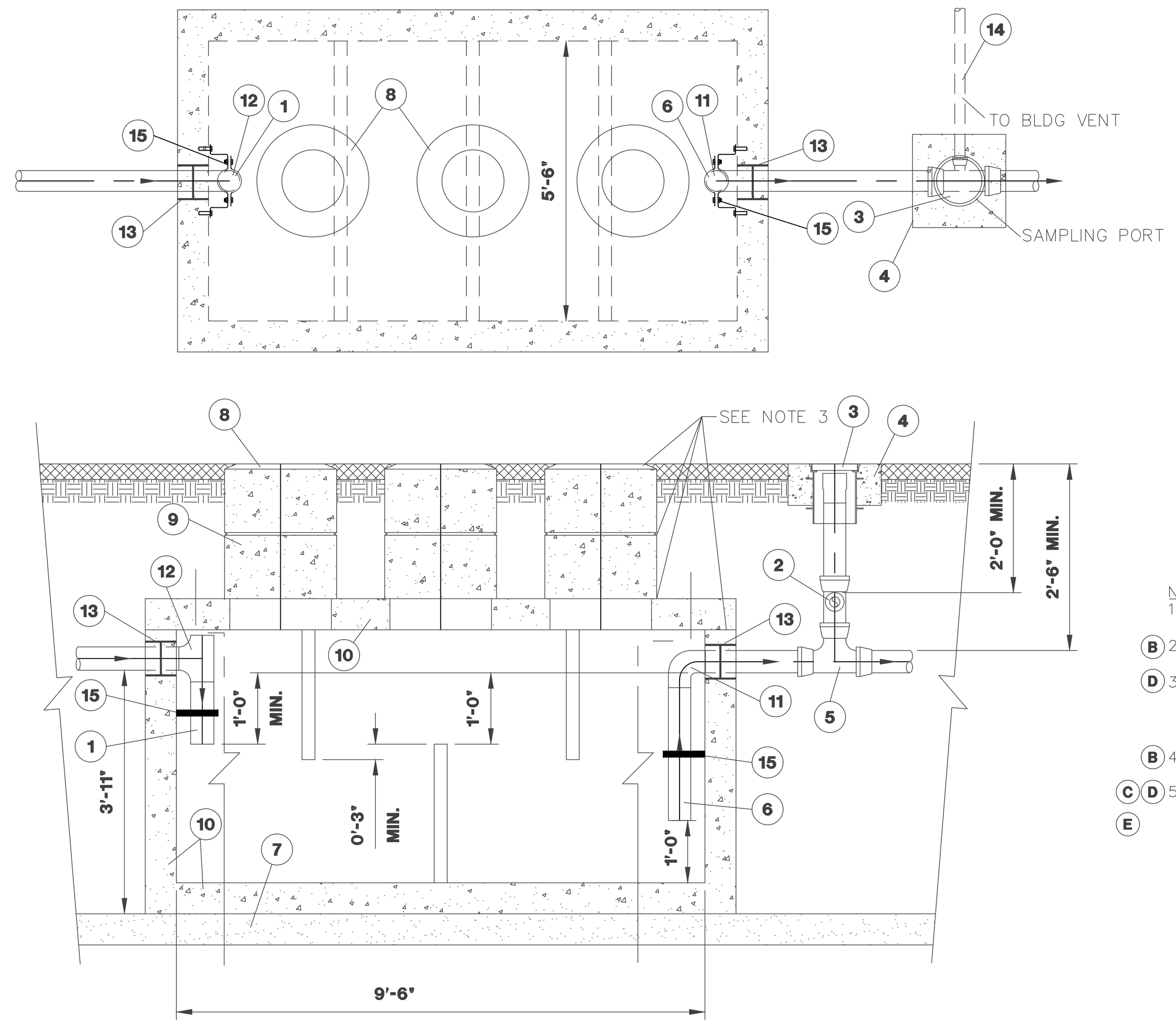


*PVC SLEEVE SHALL EXTEND AT LEAST 3' BELOW THE TOP OF THE MEDIAN NOSE AND SHALL BE FILLED WITH SAND.

SECTION A-A

MEDIAN NOSE DETAIL

Construction Details



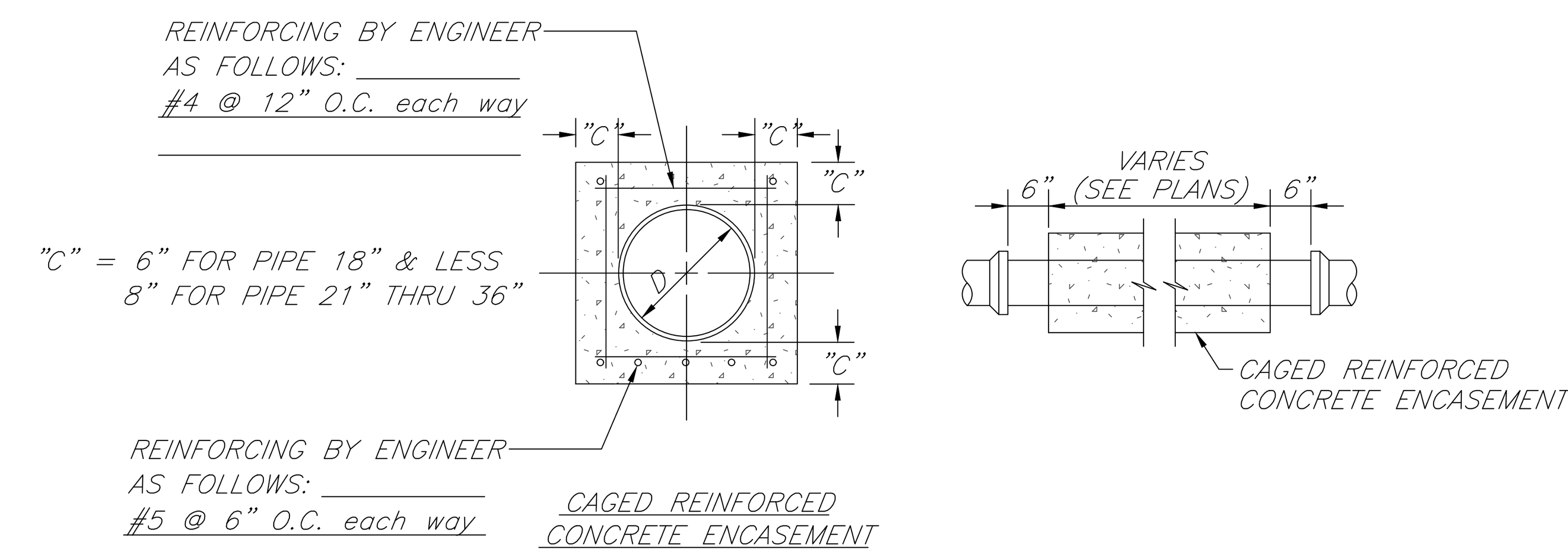
ITEM	DESCRIPTION
1	4" ABS INLET PIPE*
2	4"x4"x2" TEE WITH 2" PIPE TO BUILDING VENT*
3	THREADED C/O CAP JOSAM 58860 OR APP EQUAL**
4	CONCRETE PAD
5	4"x4"x4" TWO-WAY CLEANOUT TEE*
6	4" ABS OUTLET*
7	4" – 6" GRAVEL BEDDING
8	HEAVY-DUTY CAST IRON FRAME AND COVER ***
9	CONCRETE ADJUSTMENT RINGS
10	REINFORCE AS REQUIRED FOR SERVICE CONDITIONS
11	4" ABS 90° ELBOW*
12	4" ABS TEE*
13	A-LOK OR PRESS SEAL PSX PIPE/WALL CONNECTOR
(G) 14	2" VENT PIPE (IDENTIFY PIPE TYPE, CLASS & JOINT AS REQUIRED FOR PROJECT)
(F) 15	STAINLESS STEEL PIPE SUPPORT CLAMP ****

* 6" PIPE MAY BE SUBSTITUTED TO MATCH UPSTREAM PIPE DIAMETER.
** REFER TO CLEAN OUT DETAIL(S) ON STANDARD DETAIL SHEET.
*** CLAY & BAILEY 2008 BV OR EQUAL (FROST PROOF COVERS OPTIONAL)
(F) ****FM STAINLESS FASTENERS #63 OR EQUAL. 1/2"x2-1/2" SS BRACKET W/ 1/2"x1-1/2" FULLY THREADED SS HEX BOLT WITH 1/2" SS WASHER AND 1/2"X1-3/4" SS ANCHORS. CLAMP TO BE FACTORY INSTALLED.

NOTES:
1. THREE COVERS AND RISERS SHOWN. TWO COVERS AND RISERS CENTERED OVER UPPER TWO BAFFLES ARE OPTIONAL.
2. (B) INTERCEPTOR SIZE – 1500 GAL (REVISE THE SIZE DIMENSIONS, AS NEEDED, FOR LARGER CAPACITY INTERCEPTORS)
3. (D) ALL JOINTS AT THE FRAME & COVER*, CONCRETE ADJUSTMENT RINGS AND THE LID OF THE INTERCEPTOR SHALL BE SEALED WITH A MINIMUM OF TWO (2) ROWS OF 3/4 TO 1 INCH PREFORMED BUTYL JOINT SEALER AND A 6" BUTYL JOINT WRAP AROUND SLEEVE (EZ WRAP). THE ENDS OF THE 6" EZ WRAP SHALL OVERLAP BY 12".
4. (B) PIPING ON THE INTERIOR OF THE INTERCEPTOR SHALL BE ABS WITH SOLVENT-CEMENTED JOINTS.
5. (C)(D)(E) GREASE INTERCEPTOR INCLUDING ADJUSTMENT RINGS AND CASTINGS SHALL BE VACUUM TESTED FOR WATER TIGHTNESS AFTER THE BACKFILL OPERATIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH JCW TECHNICAL SPECIFICATIONS. A VACUUM OF 10 INCHES OF MERCURY SHALL BE DRAWN AND WITH THE VACUUM PUMP SHUT OFF THE MERCURY SHALL NOT DROP BELOW 9 INCHES WITHIN 1 MINUTE OR BELOW 5 INCHES WITHIN 5 MINUTES.

GREASE INTERCEPTOR DETAILS

Not to Scale

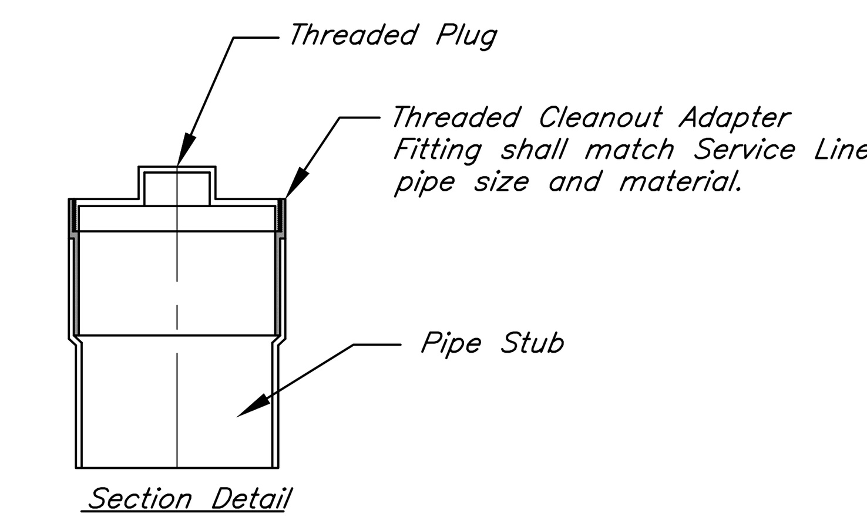


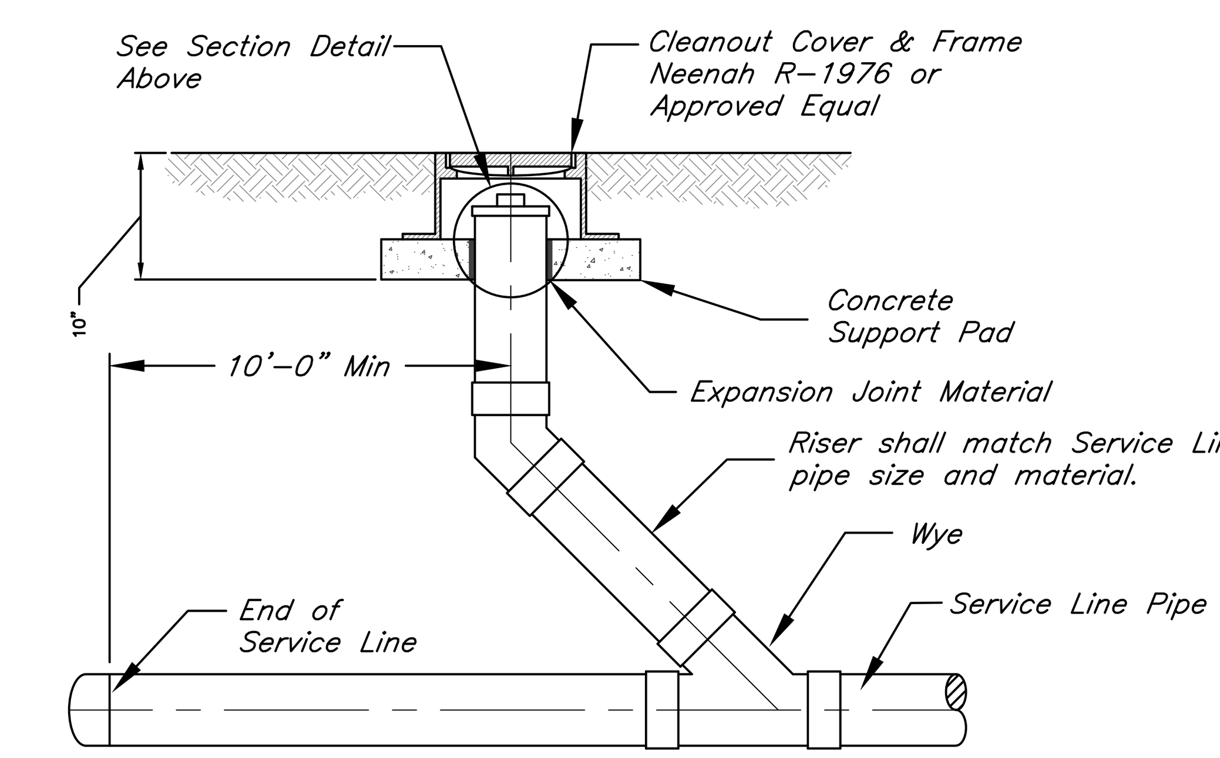
"C" = 6" for pipe 18" & less 8" for pipe 21" thru 36"

CAGED REINFORCED CONCRETE ENCASEMENT

Not to Scale

Notes:
1. All encasements shall be centered on the crossing.
2. All concrete shall be KCMMB 4K



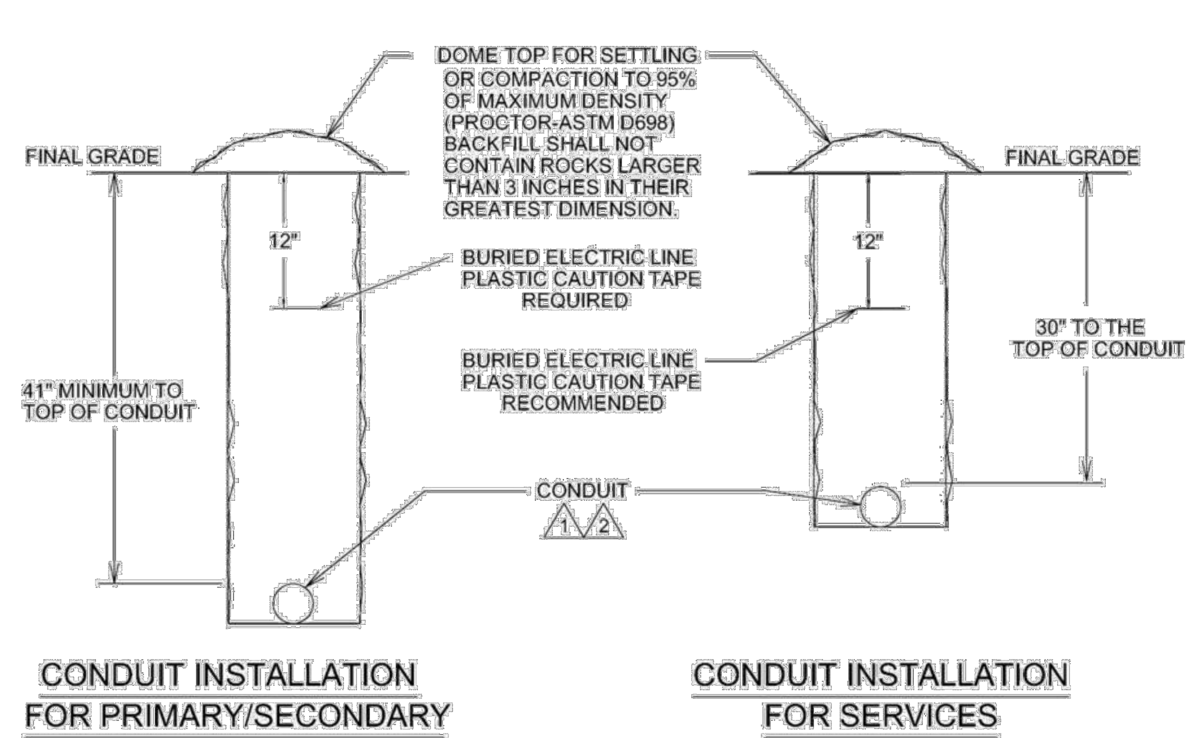


CLEANOUT DETAIL

No Scale

evergy

10.17 – Trench (Cross Section)



CONDUIT INSTALLATION FOR PRIMARY/SECONDARY

CONDUIT INSTALLATION FOR SERVICES

1. Conduit shall be NEC approved rigid conduit, such as or U.L. listed non-metallic gray PVC schedule 40. The conduits shall be free of burrs and have clean bores. Where customer/developers installed conduit interconnects with the Company's conduit, customer/developer shall not use half sizes. (EG. 2 ½", 3 ½", etc.)
2. Conduit Sizing: See Section 6 - Underground Construction (Pg. 33).
3. Installation shall conform to NESC, NEC, local codes, and this standard. Multiple conduit installations shall have the conduits separated by a maximum of 4 inches between conduits.

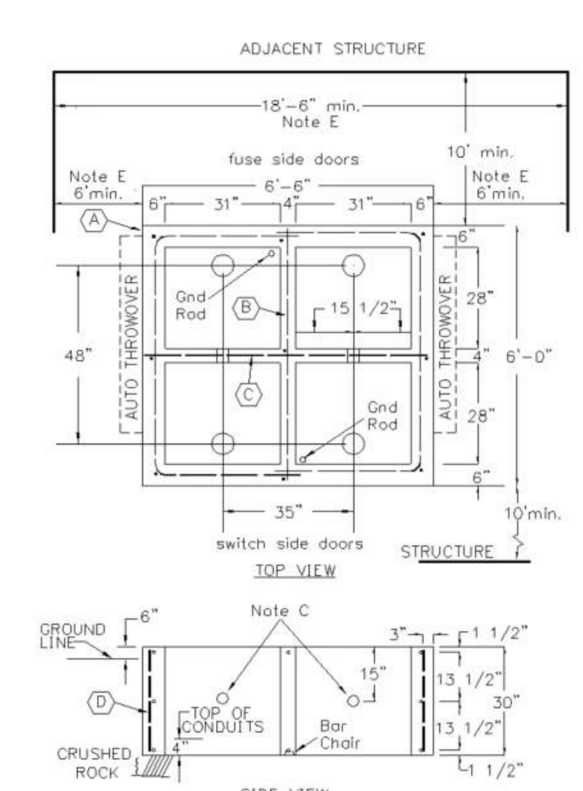
69

Revision: 11/15/19

EVERGY STANDARD TRENCH DETAIL

Not to Scale

Base for PME-9 or PME-11 Padmount Switchgear With or Without Auto Throwover Option



A. Install 6" conduits with 36" radius bends for switch position and 4" conduits with 36" radius bends for fuse positions unless specified otherwise. Direction of conduit will vary with individual jobs.

B. Grounding conductors installed in trench with primary conduit. Leave 6'-0" extra continuous length per conductor for connection to switchgear.

C. 3" diameter openings in two walls for lifting slings.

D. Full uncut 90° conduit bends must be used, requiring conduit burial depth of 61" min. as conduit approaches base.

E. For PME-9 units with or without Automatic Throwover option. Equipment side clearances are required to be 6' min with minimum total clearance of 18'-6".

Recommended lightweight aggregate mix:
- 567# Portland Cement
- 172.3# Flyash
- 19.3 cu. ft. 3/4" x #4 Haydite Aggregate
- 1609# Sand
- 6% to 8% air entrainment
- Approximately 1.379 cu. yds. required.
- Concrete to test 3000# p.s.i. minimum in 28 days.

REINFORCING BARS REQUIRED			
BAR	QUANTITY	LENGTH	SIZE
(A)	6	146" bent	#4
(B)	2	69" straight	#4
(C)	2	75" straight	#4
(D)	9	27" straight	#4

IN KANSAS 1-800-344-7233 — UTILITIES ONE CALL SYSTEMS — CALL BEFORE YOU DIG — IN MISSOURI 1-800-344-7483

BASE FOR 15kV PME-9 OR PME-11 PADMOUNT SWITCHGEAR WITH OR WITHOUT AUTO THROWOVER OPTION

DWG REV: 08/02/11	DWG: 700-109

DRAWINGS
71

SWITCHGEAR DETAIL

Not to Scale

STATE OF MISSOURI — CLINT LOUMASTER — NUMBER PE-2011009651 — 11/4/2020 — REGISTERED PROFESSIONAL ENGINEER

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Lenexa, Kansas 66219
913.492.0400
www.gbateam.com

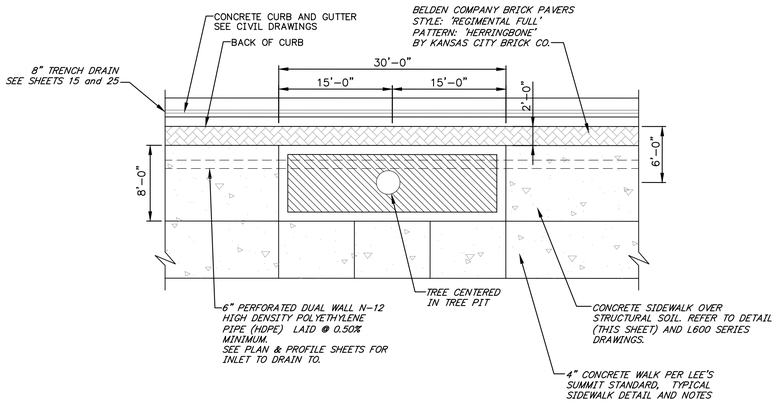
Clint Loumaster
Professional Engineer
License No. PE2011-009651

DATE:	11-4-2020
DESIGN BY:	DJM
DRAWN BY:	CMN
PROJECT NO.:	12720
SHEET NO.	21
TOTAL SHEETS	51

Street and Storm Sewer Plans
Paragon Parkway
Lee's Summit, Missouri

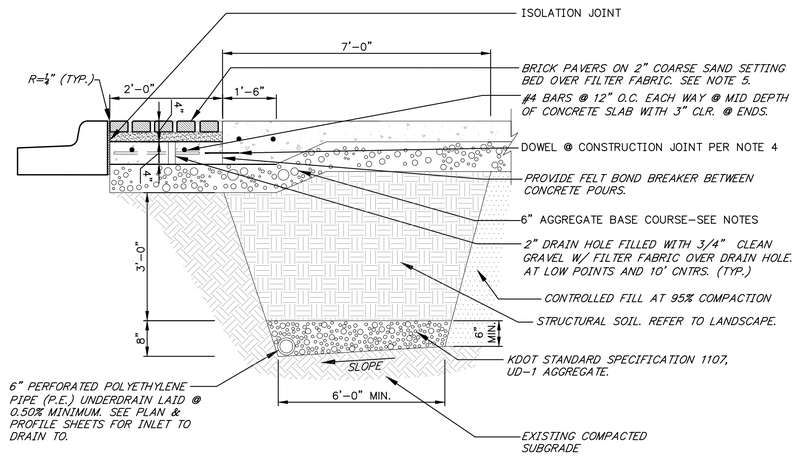
NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing 10/16/2020		

Construction Details



TREE PLANTER TOPSOIL PLAN

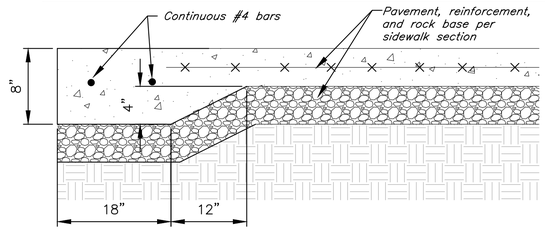
Not to Scale



NOTES:
1. ALL CONCRETE SHALL BE KCMMB–4K.
2. LEE'S SUMMIT STANDARD TYPE 1 JOINTS SHALL BE PLACED AS SHOWN ON PLANS.
3. AGGREGATE BASE COURSE SHALL BE 97% COMPACTED AB–3 OR LIMESTONE SCREENINGS WITH A WATER CONTENT BETWEEN –2 AND +1 PERCENTAGE POINTS OF THE OPTIMUM WATER CONTENT.
4. AT CONSTRUCTION JOINTS IN CONCRETE SLAB, INSTALL #5 X 12" LONG SMOOTH DOWELS @ 12" SPACING ALONG THE CONSTRUCTION JOINT. GREASE AND WRAP ONE END SIMILAR TO LEE'S SUMMIT STANDARD TYPE 2 JOINT. DOWEL INSTALLED ON EACH SIDE OF JOINT. (NO 1/2" PREMOLDED NON–EXTRUDING FILLER.)
5. BRICK PAVERS WILL BE SELECTED BY THE LANDSCAPE ARCHITECT.

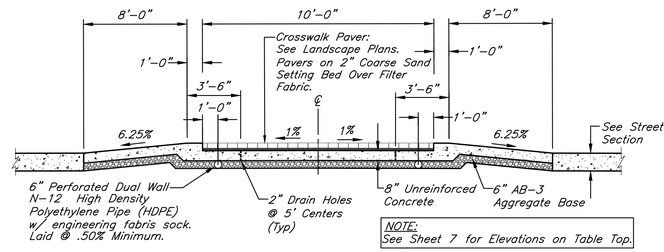
AMENITY ZONE BRICK PAVER DETAIL

Not to Scale



THICKENED EDGE DETAIL

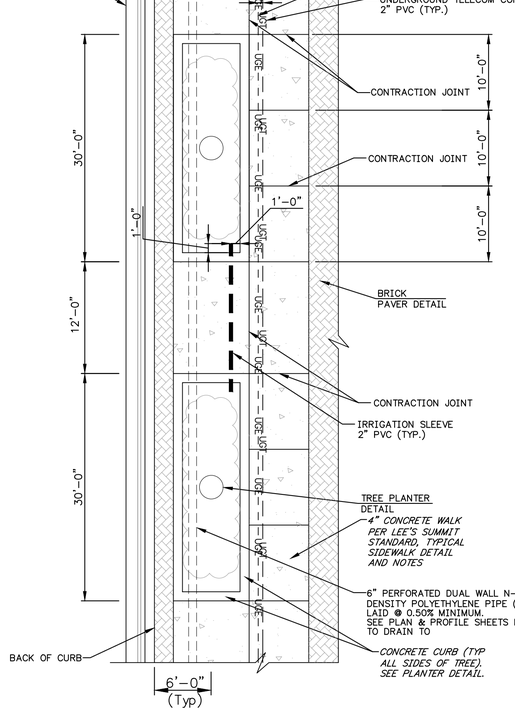
Not to Scale



NOTE:
See Sheet 7 for Elevations on Table Top.

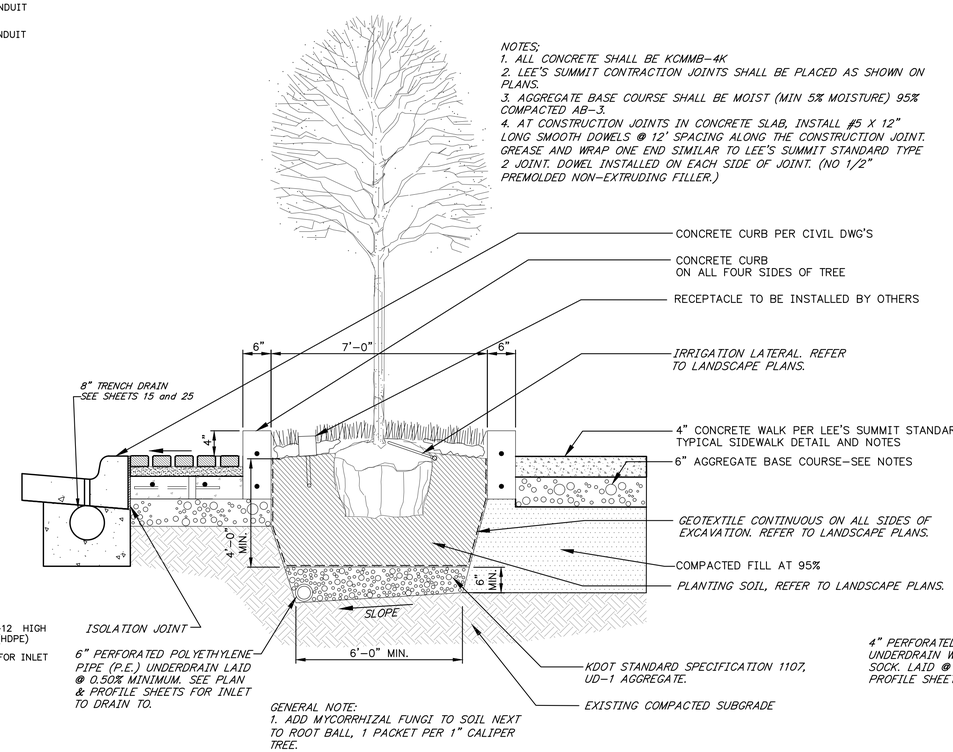
TABLE TOP CROSSWALK DETAIL

Not To Scale



TYPICAL SIDEWALK LAYOUT

Not to Scale



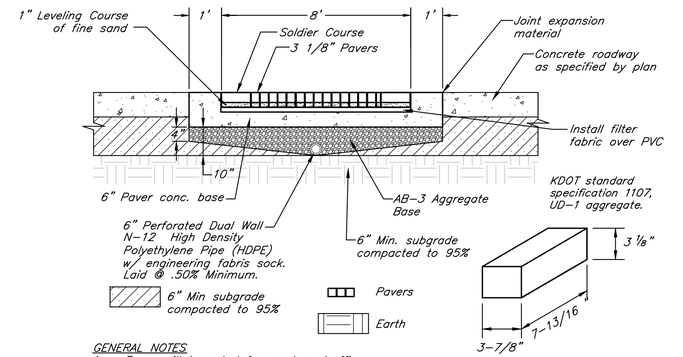
NOTES:
1. ALL CONCRETE SHALL BE KCMMB–4K
2. LEE'S SUMMIT CONTRACTION JOINTS SHALL BE PLACED AS SHOWN ON PLANS.
3. AGGREGATE BASE COURSE SHALL BE MOIST (MIN 5% MOISTURE) 95% COMPACTED AB–3.
4. AT CONSTRUCTION JOINTS IN CONCRETE SLAB, INSTALL #5 X 12" LONG SMOOTH DOWELS @ 12' SPACING ALONG THE CONSTRUCTION JOINT. GREASE AND WRAP ONE END SIMILAR TO LEE'S SUMMIT STANDARD TYPE 2 JOINT. DOWEL INSTALLED ON EACH SIDE OF JOINT. (NO 1/2" PREMOLDED NON–EXTRUDING FILLER.)

4" PERFORATED POLYETHYLENE PIPE (P.E.) UNDERDRAIN WITH ENGINEERING FABRIC SOCK. LAID @ 1.00% MINIMUM. SEE PLAN & PROFILE SHEETS FOR INLET TO DRAIN TOO.

GENERAL NOTE:
1. ADD MYCORRHIZAL FUNGI TO SOIL NEXT TO ROOT BALL, 1 PACKET PER 1" CALIPER TREE.

TREE PLANTER DETAIL

Not to Scale



GENERAL NOTES
1. Paver will be rated for roadway traffic.
2. Pavers shall be selected by Landscape Architect.
3. Paver base and edge restraint shall be KCMMB 4K concrete. Base slab and paver restraint shall be poured monolithic.
4. Pavers, leveling sand, and concrete base depth, typical all pavement areas.
5. Expansion joint material will be placed at all joints between new concrete and existing concrete.
6. Install underdrain on each end of paver sidewalk close to curbs and connect to underdrain system.
7. Pavers shall be laid in a herringbone pattern with soldier course on each side.

CROSSWALK PAVER DETAIL

Not To Scale

STATE OF MISSOURI
CLINT LOUMASTER
NUMBER PE-2011009651
11/4/2020
REGISTERED PROFESSIONAL ENGINEER

GBA architects engineers
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Lenexa, Kansas 66219
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Clint Loumaster
Professional Engineer
License No. PE2011-009651

DATE:	11–4–2020
DESIGN BY:	DJM
DRAWN BY:	CMN
PROJECT NO.:	12720
SHEET NO.:	23
TOTAL SHEETS	51

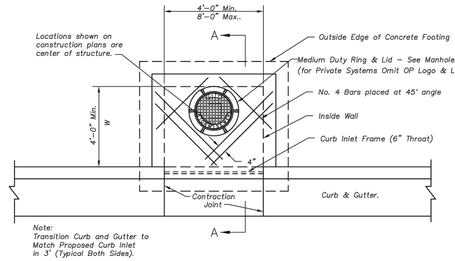
Street and Storm Sewer Plans

Paragon Parkway

Lee's Summit, Missouri

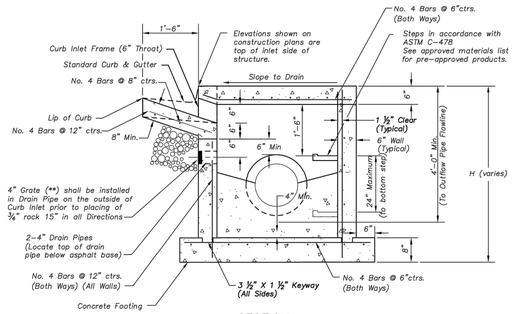
NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing 10/16/2020		

Streetscape Details



PLAN

Not to Scale



SECTION A–A

Not to Scale

NON–SETBACK CURB INLET (6"THROAT)

Non–Setback Curb Inlet Notes

General

1. City of Lee's Summit Municipal Code, Design Standards, and Specifications are incorporated except as otherwise noted.
2. All storm sewer structures shall be pre–cast or poured in place. If pre–cast structures are used for publicly financed, maintained or administered construction, the tops shall be poured in place and the wall steel shall be left exposed to a height 2" below the finish top elevation, or as directed by the City Engineer.
3. Pre–cast shop drawings are to be approved by the City Engineer for publicly financed or administered projects. Pre–cast shop drawings for privately financed projects are to be submitted to the Engineering Services Division of the Planning and Development Services Department upon request.
4. Do not scale these drawings for dimensions or clearances. Any questions regarding dimensions shall be brought to the attention of the City Engineer prior to construction.
5. On–grade inlets shall conform to the street grade. Sump inlets shall be level.
6. The first dimension listed in the construction notes is the "L" dimension. The second dimension is the "W" dimension. The concrete thickness and reinforcement shown is for boxes with ("L"+"H") and ("W"+"H") less than or equal to 20. For boxes with either of these calculations greater than 20, a special design is required.

Concrete

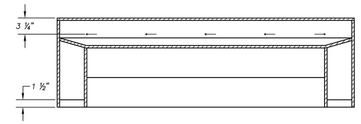
7. Concrete used in this work shall be KCMMB4K, as approved by the Kansas City Metropolitan Materials Board, and shall meet the requirements of the Overland Park Municipal Code.
8. Inlet floors shall be shaped with non–reinforced concrete inverts to provide smooth flow.
9. Bevel all exposed edges with ¾" triangular molding.

Reinforcing Steel

10. Reinforcing steel shall be new billet, minimum Grade 60 as per ASTM A615, and shall be bent cold.
11. All dimensions relative to reinforcing steel are to centerline of bars. 2" clearance shall be provided throughout unless noted otherwise. Tolerance of +/– ½" shall be permitted.
12. All lap splices not shown shall be a minimum of 40 bar diameters in length.
13. All reinforcing steel shall be supported on fabricated steel bar supports @ 3'–0" maximum spacing.
14. All dowels shall be accurately placed and securely tied in place prior to placement of bottom slab concrete. Sticking of dowels into fresh or partially hardened concrete will not be acceptable.

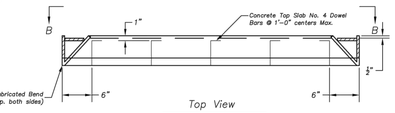
Construction

15. The bottom slab shall be at least 24 hours old before placing sidewall concrete. All sidewall forms shall remain in place a minimum of 24 hours after sidewalls are poured before removal, and after removal shall be immediately treated with membrane curing compound.
16. All curb inlet tops are to be contructed after final curb string line has been approved by the engineer and prior to curb construction or as directed by the city engineer.
17. Pipe connections to pre–cast structures shall have a minimum of 6" of concrete around the entire pipe within 2' of the structure.
18. Material selection and compaction requirements for backfill around structures shall be as specified in the Manual of Infrastructure Standards for Right of Way Restoration, as promulgated by the City Engineer.



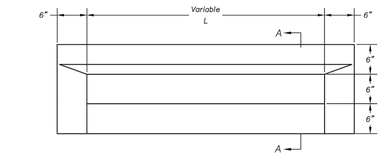
Rear View (Section B–B)

Not to Scale



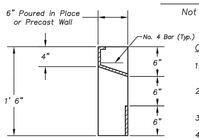
Top View

Not to Scale



Front View

Not to Scale



Side View (Section A–A)

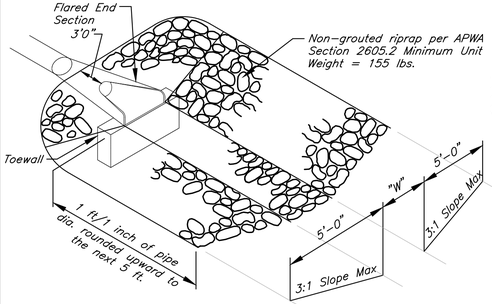
Not to Scale

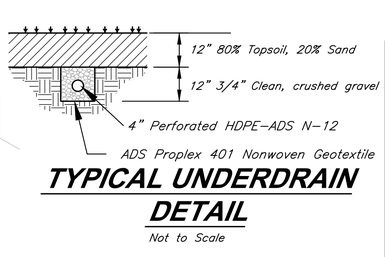
Curb Inlet Frame Notes

1. All welds shall be performed in accordance with appropriate AWS Specifications and Procedures.
2. All welds on exposed surfaces shall be dressed so as to provide a pleasing finished appearance.
3. All flat steel shall be 7 Gage or 3/16" thick.
4. The entire frame shall be hot dip zinc coated in accordance with ASTM A–123.

NON-SETBACK CURB INLET DETAIL

Not to Scale



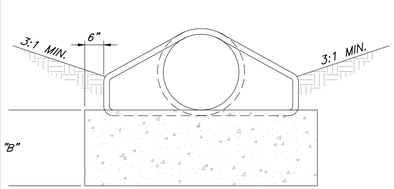


TYPICAL UNDERDRAIN DETAIL

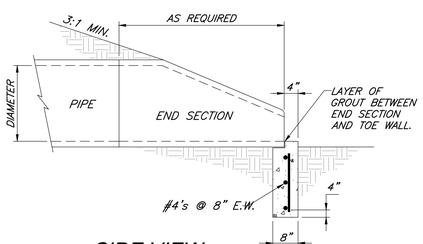
Not to Scale

OUTLET EROSION PROTECTION - RIPRAP

Not to Scale



FRONT VIEW



SIDE VIEW

TABLE

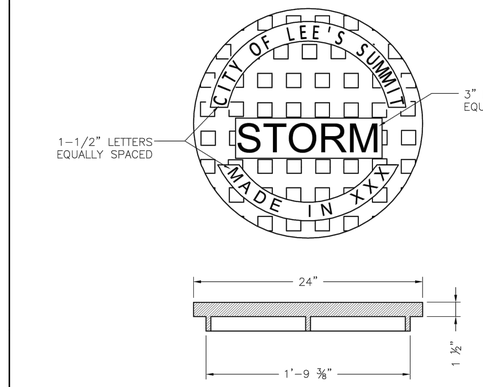
TOE WALL DEPTH	
PIPE DIAMETER	"B"
12" – 21"	18"
24" – 48"	24"
54" – 66"	36"

END SECTION NOTES:

1. THE DEPTH OF THE TOE WALL SHALL BE PER TABLE. IF BEDROCK IS ENCOUNTERED A MINIMUM OF 12" INTO BEDROCK IS REQUIRED.
2. ALL CONCRETE SHALL BE KCMMB–4K.

END SECTION DETAIL

NOT TO SCALE



STANDARD 24" MANHOLE COVER
MINIMUM WEIGHT = 160 LB
NOTE: PICK HOLES NOT SHOWN

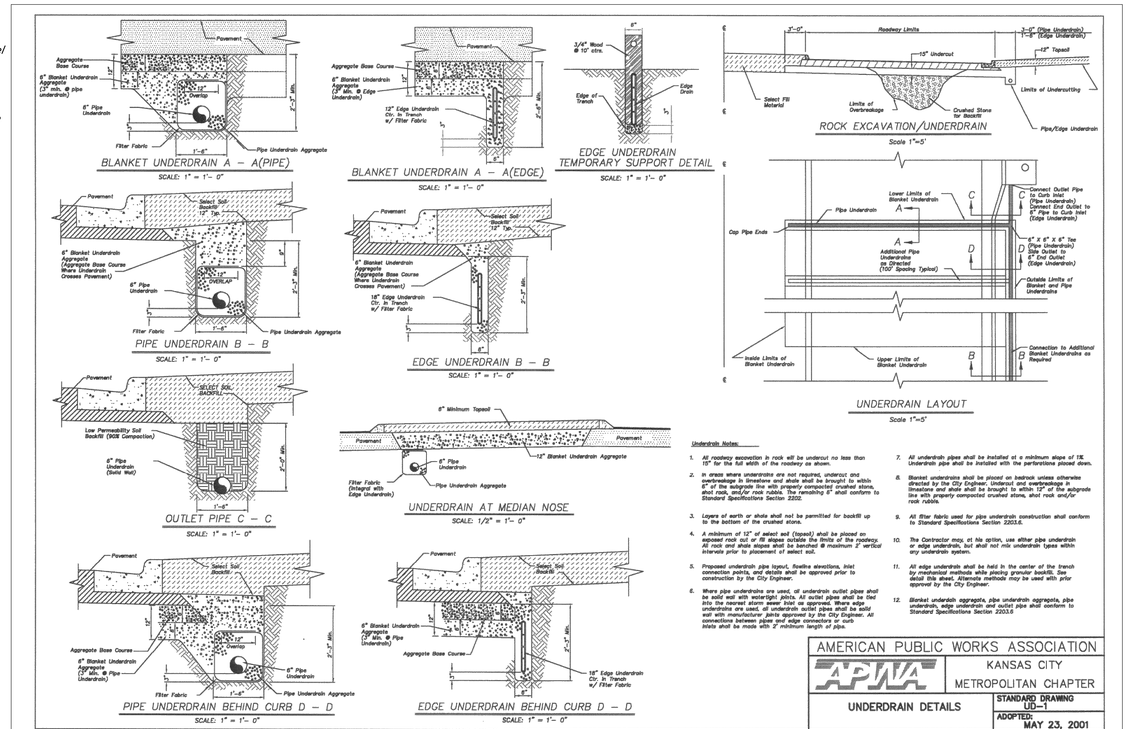
*COVER AND FRAME MODEL INFORMATION REFER TO THE STORMWATER APPROVED PRODUCT LIST.

LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

STORM MANHOLE COVER DETAIL

Date: 04/17
Drawn By: MJF
Checked By: DL

STM-6



Underdrain Notes:

1. All roadway excavation in rock will be undercut no less than 15" for the full width of the roadway as shown.
2. In areas where understrata are not required, undercut and overbreakage in limestone and shale shall be brought to within 6" of the subgrade line with properly compacted crushed stone, shot rock, and/or rock rubble. The remaining 6" shall conform to Standard Specifications Section 2202.
3. Layers of earth or shale shall not be permitted for backfill up to the bottom of the crushed stone.
4. A minimum of 12" of select soil material (topsoil) shall be placed on exposed rock cut or fill slopes outside the limits of the roadway. All rock and shale slopes shall be benched @ maximum 2' vertical intervals prior to placement of select soil.
5. Proposed underdrain pipe layout, flowline elevations, inlet connection points, and details shall be approved prior to construction by the City Engineer.
6. Where pipe underdrains are used, all underdrain outlet pipes shall be solid wall with watertight joints. All outlet pipes shall be tied into the nearest storm sewer inlet as approved. Where edge underdrains are used, all underdrain outlet pipes shall be solid wall with manufacturers' joints approved by the City Engineer. All connections between pipes and edge connectors or curb inlets shall be made with 3' minimum length of pipe.
7. All underdrain pipes shall be installed at a minimum slope of 1%. Underdrain pipe shall be installed with the perforations placed down.
8. Blanket underdrains shall be placed on bedrock unless otherwise directed by the City Engineer. Undercut and overbreakage in limestone and shale shall be brought to within 12" of the subgrade line with properly compacted crushed stone, shot rock and/or rock rubble.
9. All filter fabric used for pipe underdrain construction shall conform to Standard Specifications Section 2203.6.
10. The Contractor may, at his option, use either pipe underdrain or edge underdrain, but shall not mix underdrain types within any underdrain system.
11. All edge underdrain shall be held in the center of the trench by mechanical methods while placing granular backfill. See detail this sheet. Alternate methods may be used with prior approval by the City Engineer.
12. Blanket underdrain aggregate, pipe underdrain aggregate, pipe underdrain, edge underdrain and outlet pipe shall conform to Standard Specifications Section 2203.6

AMERICAN PUBLIC WORKS ASSOCIATION
APWA KANSAS CITY METROPOLITAN CHAPTER

UNDERDRAIN DETAILS

STANDARD DRAWING UD–1
ADOPTED: MAY 23, 2001

STATE OF MISSOURI
CLINT LOUMASTER
NUMBER PE–2011009651
11/4/2020
REGISTERED PROFESSIONAL ENGINEER

GBA architects engineers
9801 Renner Boulevard
Lenexa, Kansas 66219
913.492.0400
www.gbateam.com

DATE:	11–4–2020
DESIGN BY:	DJM
DRAWN BY:	CMN
PROJECT NO.:	12720
SHEET NO.	24
TOTAL SHEETS	51

Clint Loumaster
Professional Engineer
License No. PE2011-009651

Street and Storm Sewer Plans
Paragon Parkway
Lee's Summit, Missouri

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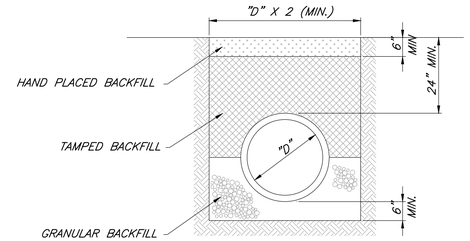
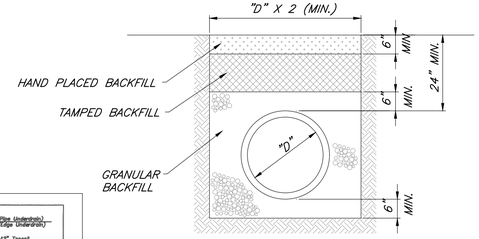
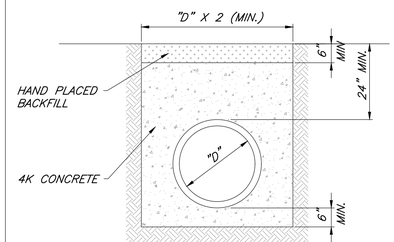


FIRST CLASS BEDDING (RCP)
CLASS B



HDPE/PVC PIPE BEDDING
CLASS C



CONCRETE ENCASEMENT
CLASS A

NOTES:

1. GRANULAR FILL SHALL BE 1/2" CLEAN ROCK, PLACED IN 6" LIFTS AND COMPACTED BY SLICING WITH A SHOVEL.
2. TAMPED FILL SHALL BE FINELY DIVIDED, JOB EXCAVATED MATERIAL FREE OF DEBRIS, ORGANIC MATERIAL, AND STONES, COMPACTED TO TYPE AA MR–5 COMPACTION.
3. HAND PLACED FILL SHALL BE FINELY DIVIDED MATERIAL, FREE OF DEBRIS AND STONES, COMPACTED TO TYPE AA MR–5 COMPACTION.
4. ALL PIPE SHALL BE INSPECTED PRIOR TO BACKFILL. ALL PIPE COVERED PRIOR TO INSPECTION SHALL BE UNCOVERED AT THE CONTRACTORS EXPENSE.

PIPE BEDDING DETAILS

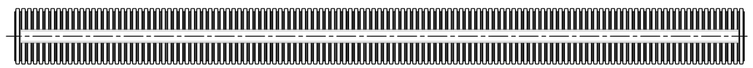
Not to Scale

Storm Sewer Details

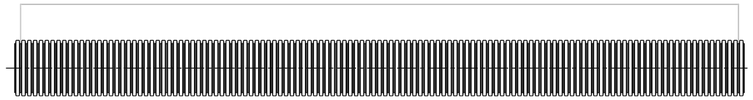
8" DURASLOT® WITH 6" SLOT

PIPE SIZE	PART №
8"	0860-DS

CROSS SECTION



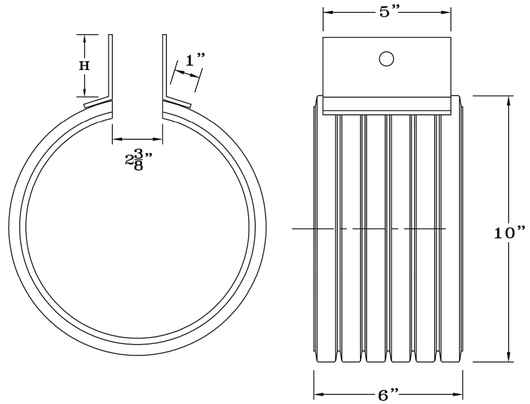
PLAN VIEW



ELEVATION

HCPS DWG #PI-5

8" DURASLOT® COUPLER BAND



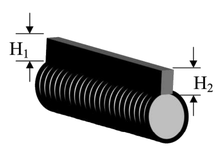
END VIEW

SIDE VIEW

MODIFIED PART №	ORIGINAL PART №	H
0821-DS	0811-AA	2"
0826-DS	0811-AA	5.5"

HCPS DWG #BD-3

DURASLOT® Variable Height Slot Table



DURASLOT Number	H_1	H_2	DURASLOT Number	H_1	H_2
(Dia.) * - V1	2 1/2	3 1/8	(Dia.) * - V15	11 1/4	11 7/8
- V2	3 1/8	3 3/4	- V16	11 7/8	12 1/2
- V3	3 3/4	4 3/8	- V17	12 1/2	13 1/8
- V4	4 3/8	5	- V18	13 1/8	13 3/4
- V5	5	5 5/8	- V19	13 3/4	14 3/8
- V6	5 5/8	6 1/4	- V20	14 3/8	15
- V7	6 1/4	6 7/8	- V21	15	15 5/8
- V8	6 7/8	7 1/2	- V22	15 5/8	16 1/4
- V9	7 1/2	8 1/8	- V23	16 1/4	16 7/8
- V10	8 1/8	8 3/4	- V24	16 7/8	17 1/2
- V11	8 3/4	9 3/8	- V25	17 1/2	18 1/8
- V12	9 3/8	10	- V26	18 1/8	18 3/4
- V13	10	10 5/8	- V27	18 3/4	19 3/8
- V14	10 5/8	11 1/4	- V28	19 3/8	20

* Each piece will have a 3 or 4 digit number starting with pipe diameter.

Ex: The first piece in a line of 8" variable height slot = 8 - V1
The fourth piece in a line of 12" variable height slot = 12 - V4

STATE OF MISSOURI
CLINT LOUMASTER
NUMBER PE-2011009651
11/4/2020
REGISTERED PROFESSIONAL ENGINEER

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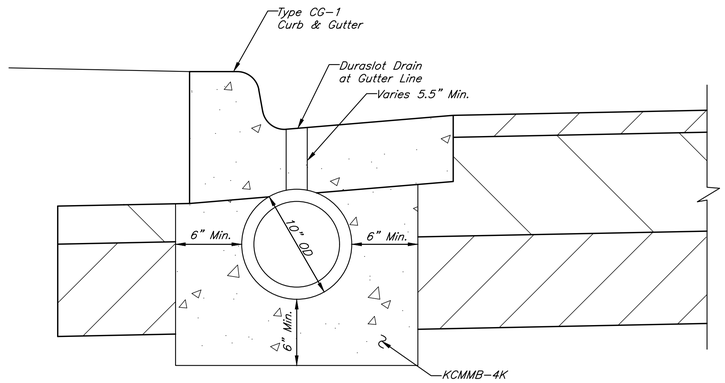
DATE:	11-4-2020
DESIGN BY:	DJM
DRAWN BY:	CMN
PROJECT NO.:	12720
SHEET NO.:	25
TOTAL SHEETS	51

Clint Loumaster
Professional Engineer
License No. PE2011-009651

Street and Storm Sewer Plans
Paragon Parkway
Lee's Summit, Missouri

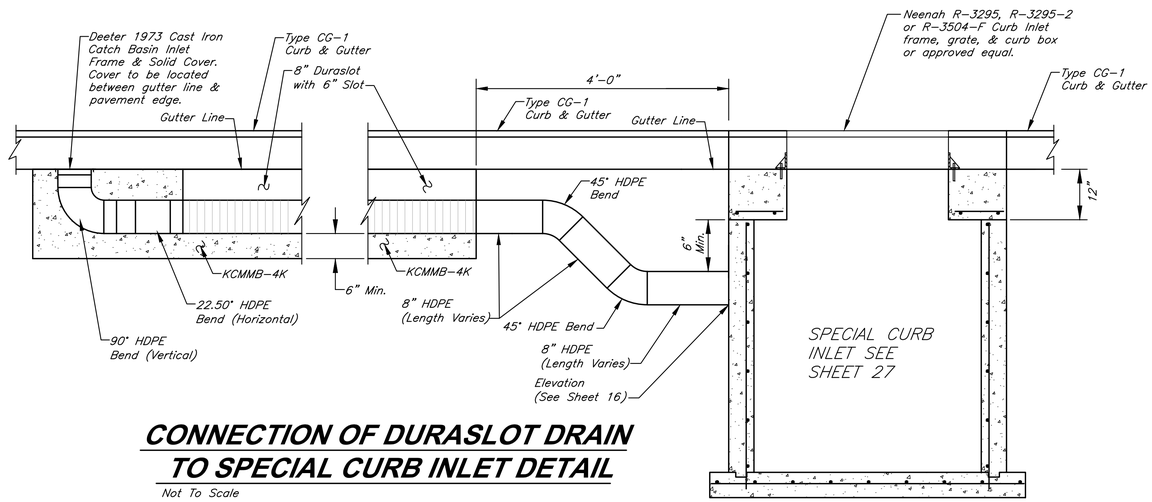
NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing 10/16/2020		

Note: Details for prefabricated storm structures are prepared by others. GBA does not warrant the adequacy or accuracy of these designs.



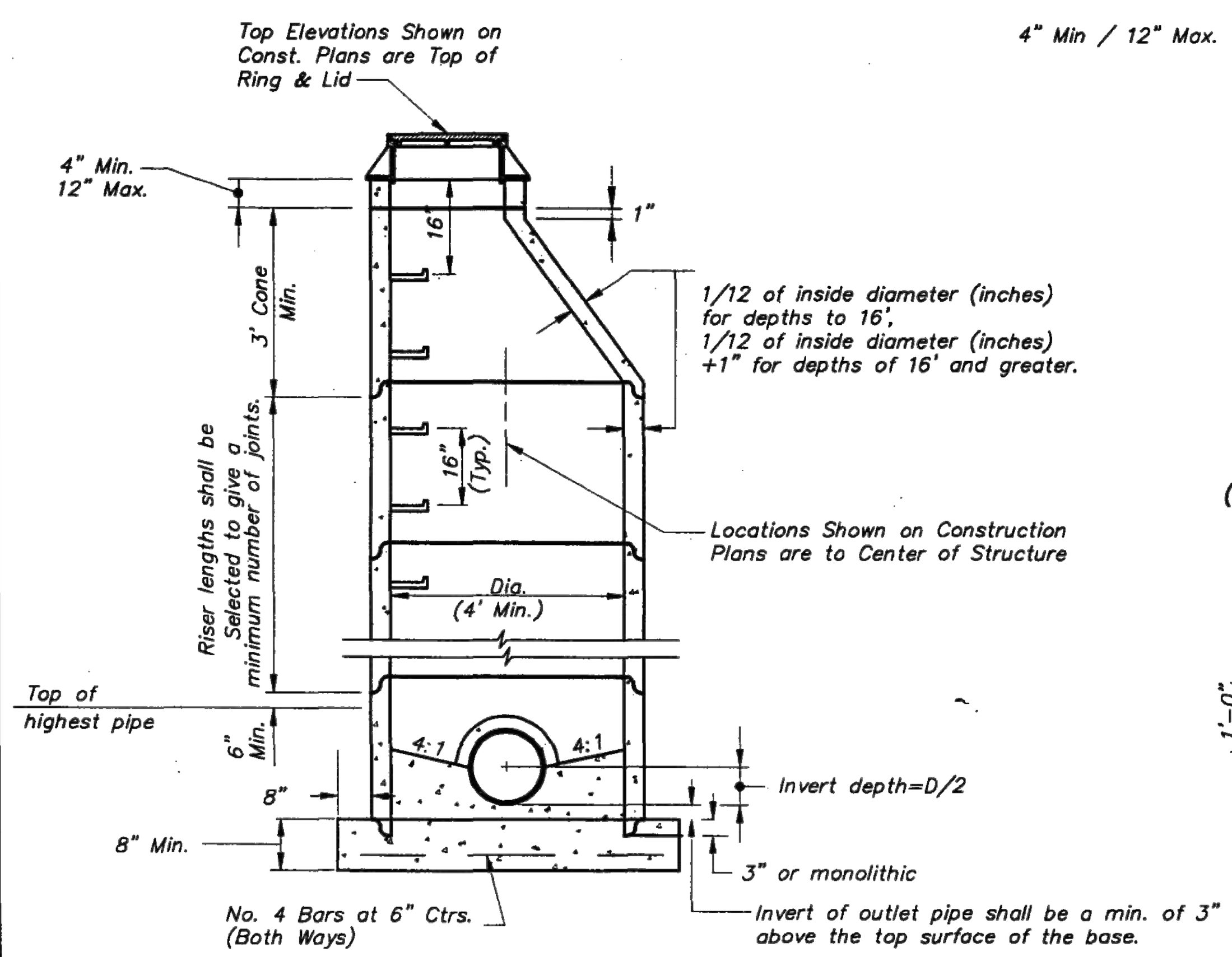
DURASLOT INSTALLATION DETAIL

Not To Scale

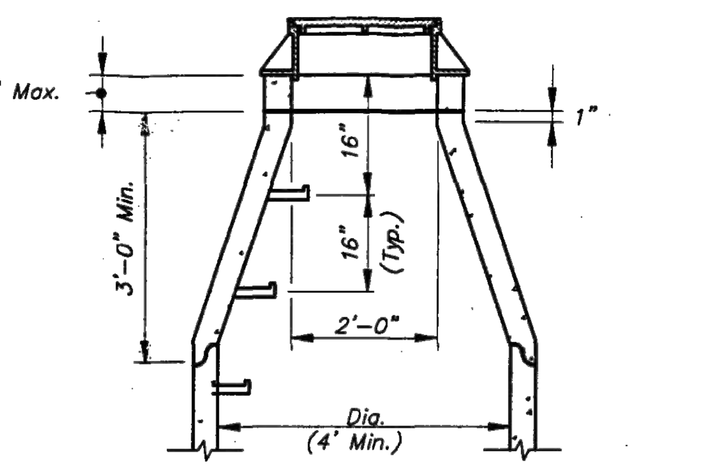


CONNECTION OF DURASLOT DRAIN TO SPECIAL CURB INLET DETAIL

Not To Scale

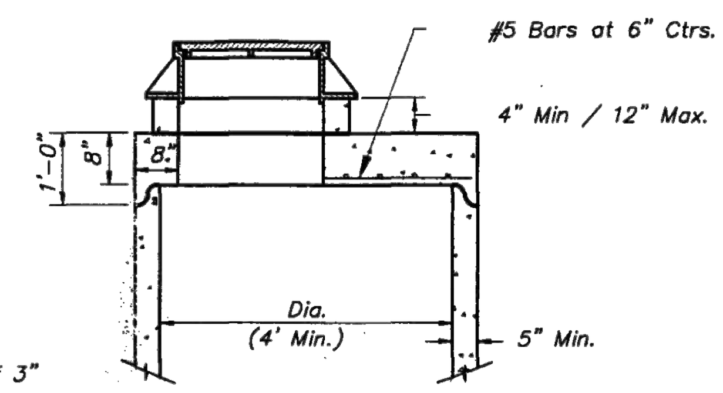


STANDARD PRECAST MANHOLE (ECCENTRIC CONE)



STANDARD PRECAST MANHOLE (CONCENTRIC CONE)

(See Eccentric Cone For Other Details)



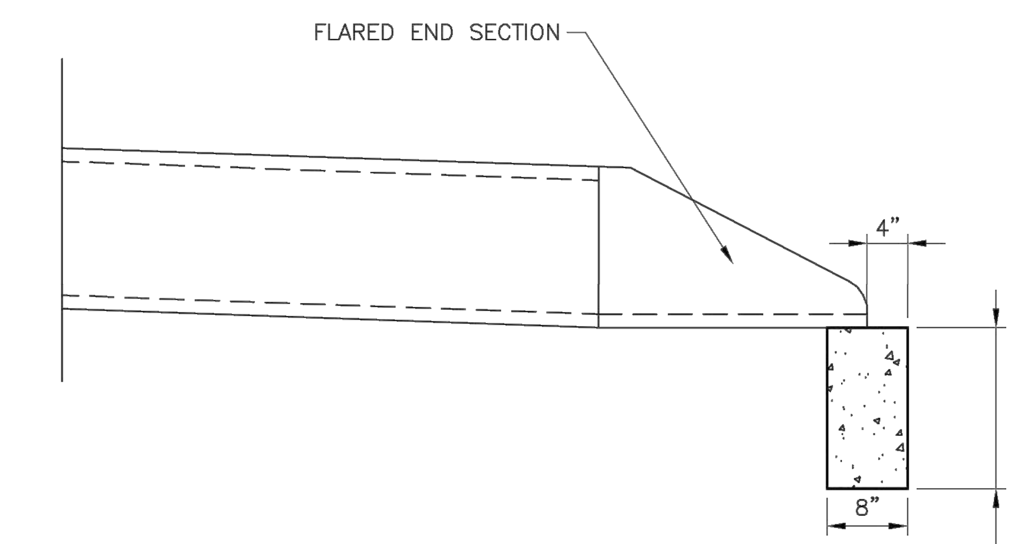
STANDARD PRECAST MANHOLE (SHALLOW TYPE)

(See Eccentric Cone For Other Details)

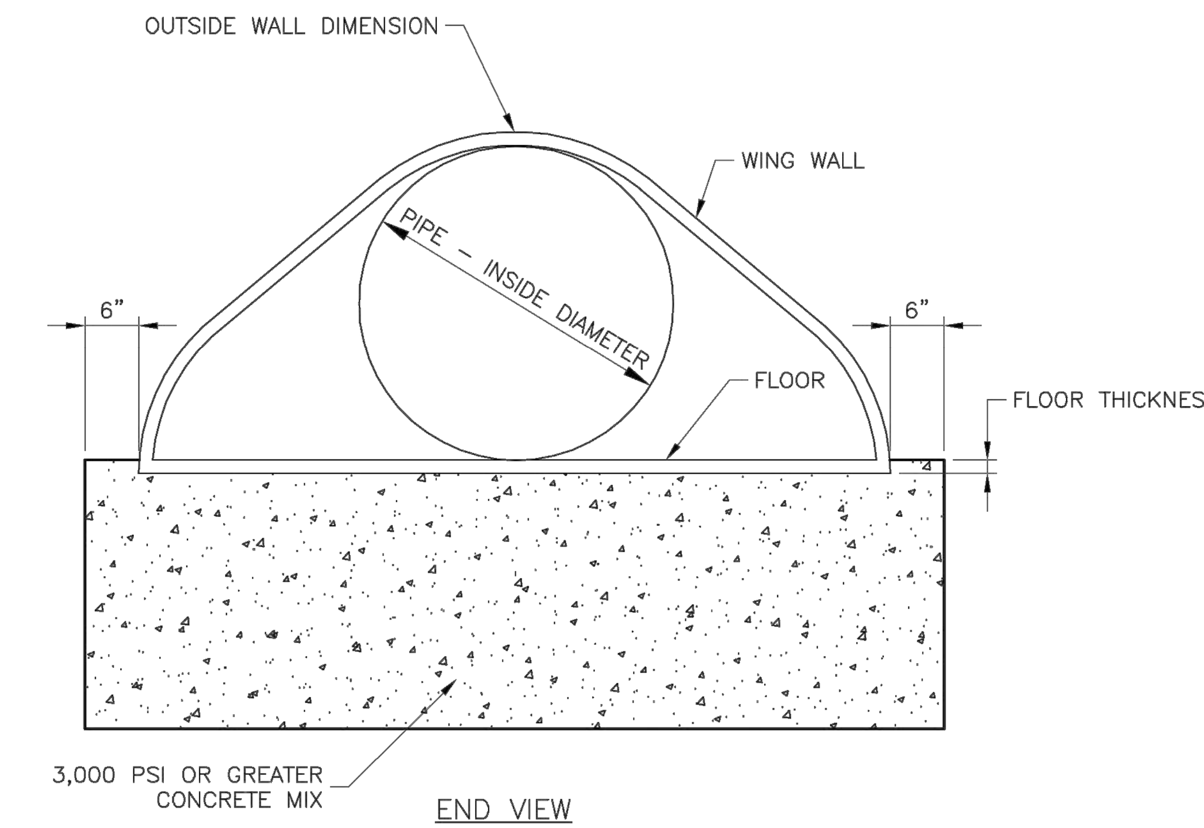
GENERAL NOTES:

1. All manholes are to be precast concrete and of Eccentric Cone type unless otherwise specified.
2. Manhole top adjustments shall be accomplished by the use of concrete adjustment rings.
3. Top of manhole casting shall be set flush and on same slope as finished surface or as directed by the Engineer.
4. Reinforcement in all sections shall equal or exceed A.S.T.M. C-478 specifications.
5. The engineer shall designate modifications for manholes with special designs.
6. The inside diameter of the manhole shall be 4'-0" for pipe diameters from 12" thru 24", 5'-0" for pipe diameters from 27" thru 36", and 6'-0" for pipe diameters 42" thru 48".
8. Clearance Tolerance of Pipe Openings: The Maximum Allowable Pipe Opening on a Horizontal Axis Shall be the Outside Diameter of the Pipe Plus 12". The Maximum Allowable Pipe Opening on Vertical Axis Shall be the Outside Diameter Plus 8". The Minimum Clearance Between the Outside Surface of an Installed pipe and the Concrete of the Manhole Shall be 2".
9. Installation of Pipe Openings: All required pipe openings shall be plant cast in manhole units. Field alterations of openings will be permitted provided walls are scored with a masonry saw to a depth sufficient to sever reinforcing steel. A chipping hammer may then be used to remove the concrete. Minimum distance between any two adjacent pipes shall be 4".
10. No direct payment for shaping floor or connecting pipes as shown on plans.
11. Ring & Cover to be Neenah R-1736, Clay & Bailey #2008, Deeter #1316, or approved equal. (Casting may vary by municipality, refer to plans & contract documents.)
12. Sanitary Sewers shall be coated and conform to Section 2600.

AMERICAN PUBLIC WORKS ASSOCIATION
APWA — KANSAS CITY METROPOLITAN CHAPTER
MANHOLE DETAILS — STANDARD DRAWING NUMBER MH - 1 — ADOPTED: APRIL 17, 1996

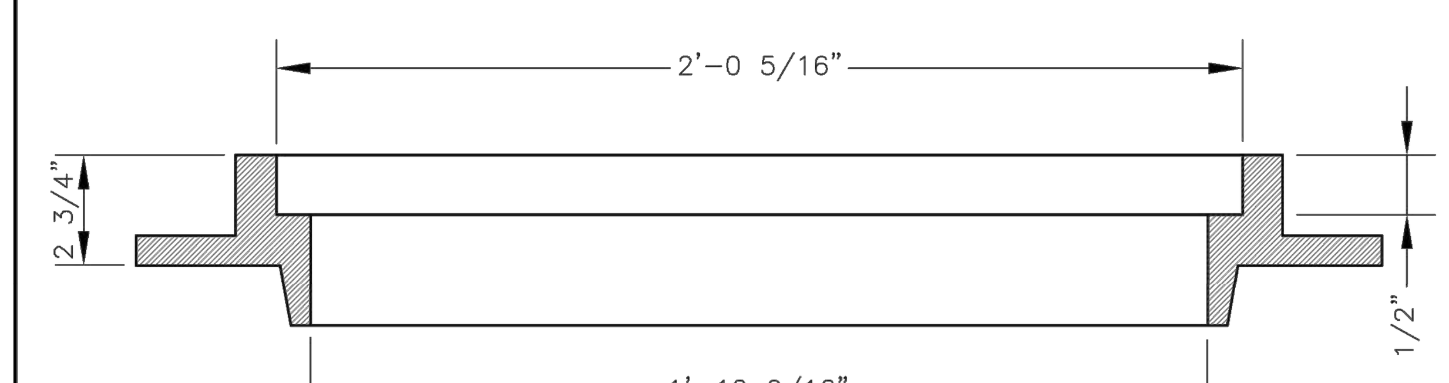


PLAN VIEW
NOT TO SCALE

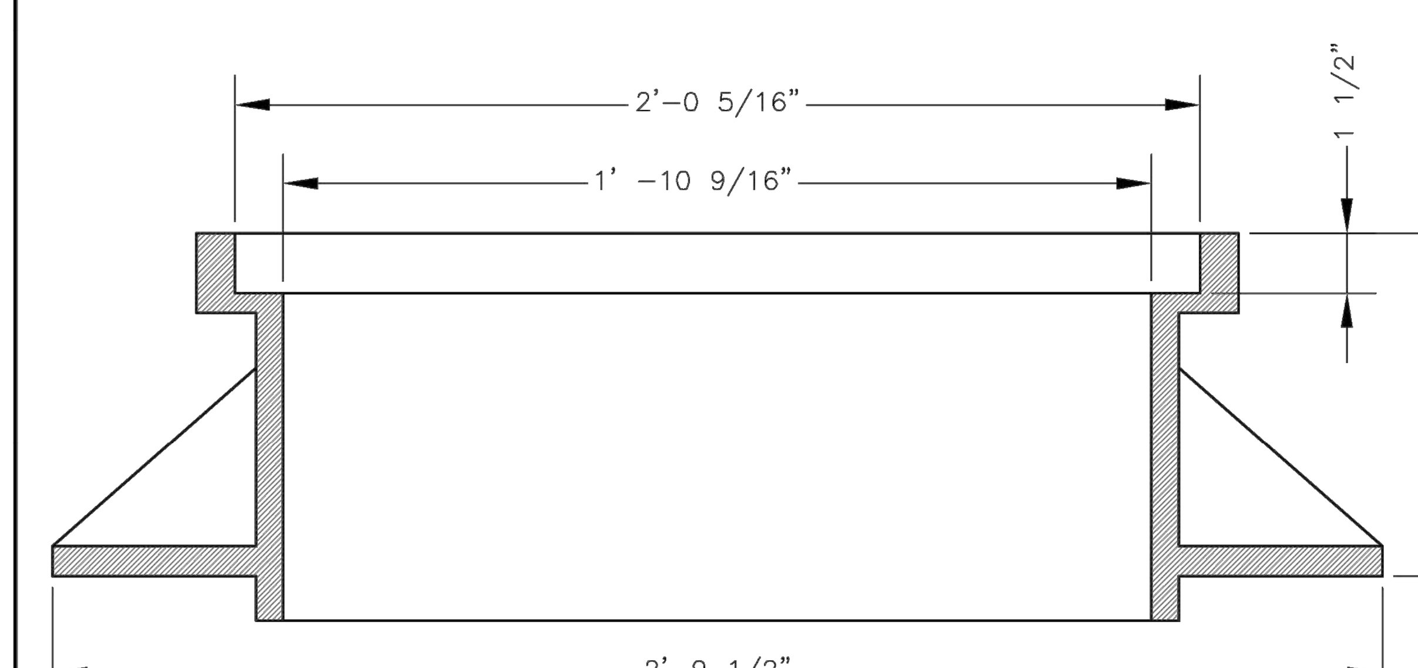


END VIEW
NOT TO SCALE

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063
FLARED END SECTION SUPPORT DETAIL
Date: 04/17 — Drawn By: MJF — Checked By: DL
STM-5



SLAB MANHOLE FRAME
LEE'S SUMMIT PART NO.: LS103A
MINIMUM WEIGHT = 145 LB



STANDARD 24" MANHOLE FRAME
LEE'S SUMMIT PART NO.: LS101A
MINIMUM WEIGHT = 250 LB

*COVER AND FRAME MODEL INFORMATION REFER TO THE STORMWATER APPROVED PRODUCTS LIST.

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063
STORM MANHOLE FRAME DETAIL
Date: 04/17 — Drawn By: MJF — Checked By: DL
STM-7

STATE OF MISSOURI — CLINT LOUMASTER — NUMBER PE-2011009651 — REGISTERED PROFESSIONAL ENGINEER — 11/4/2020

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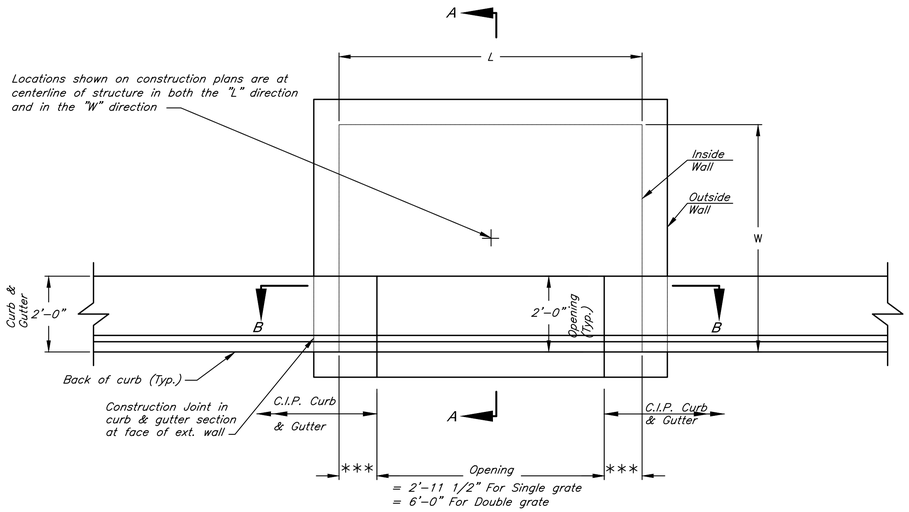
DATE:	11-4-2020
DESIGN BY:	DJM
DRAWN BY:	CMN
PROJECT NO.:	12720
SHEET NO.	26
TOTAL SHEETS	51

Clint Loumaster
Professional Engineer
License No. PE2011-009651

Street and Storm Sewer Plans
Paragon Parkway
Lee's Summit, Missouri

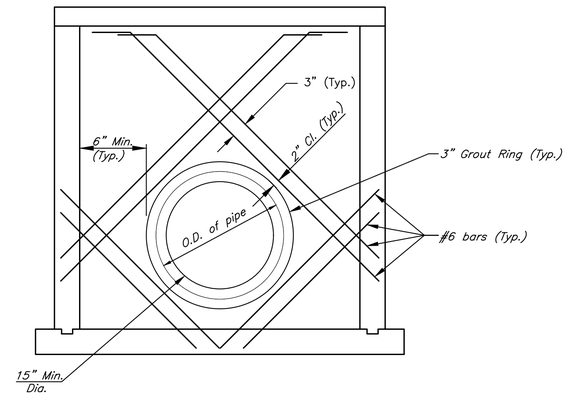
NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing 10/16/2020		

Storm Sewer Details

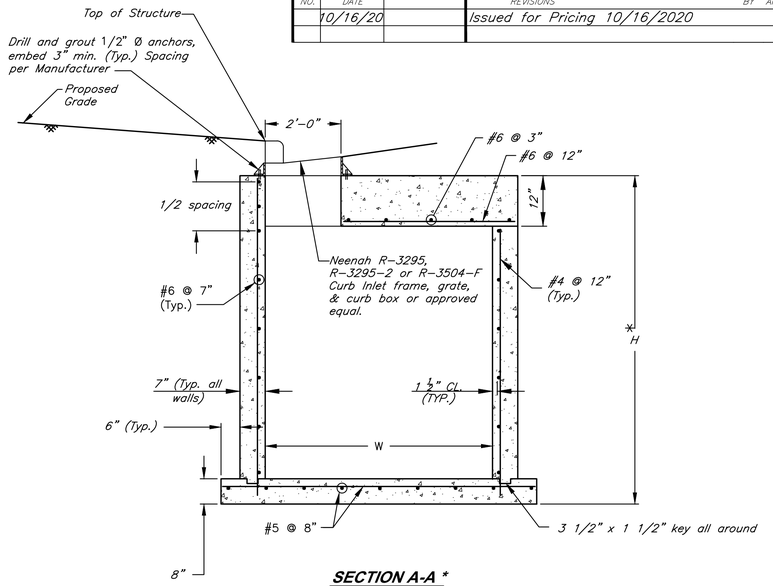


PLAN

*** Center opening in "L" direction
Steel grate not shown for clarity

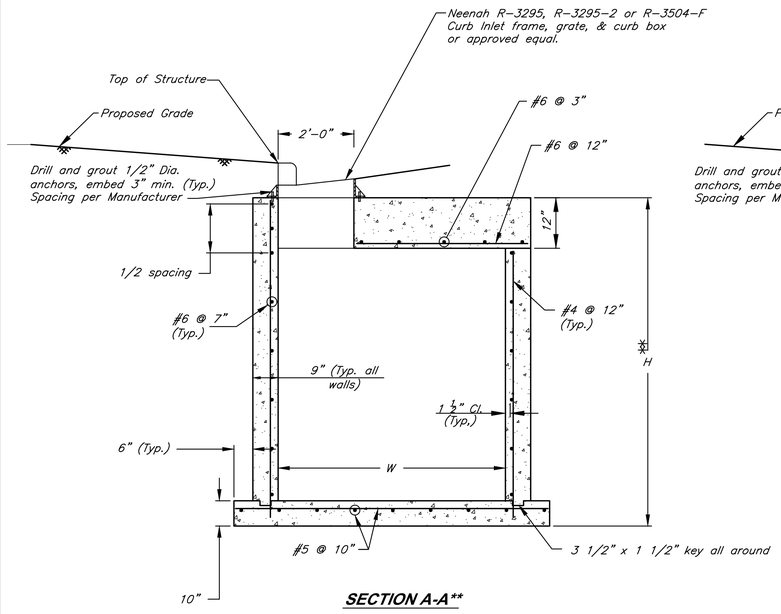


TYPICAL PIPE PENETRATION



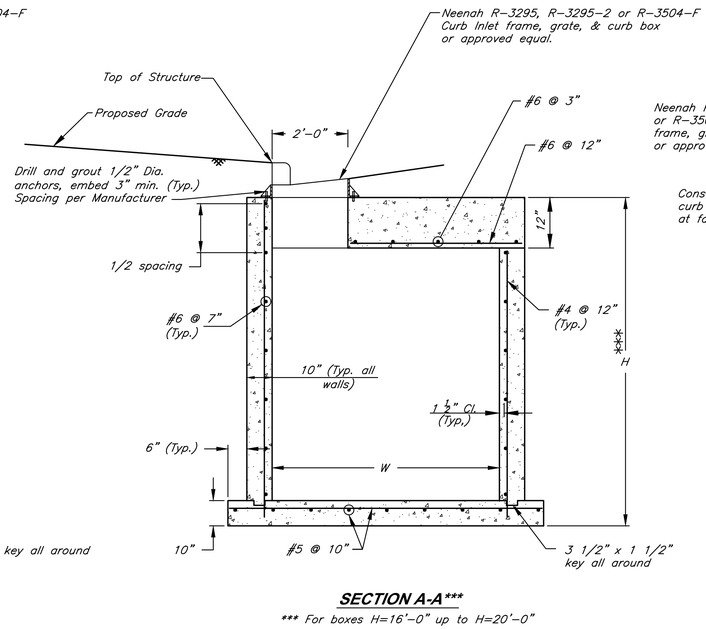
SECTION A-A *

* For boxes up to H=12'-0"



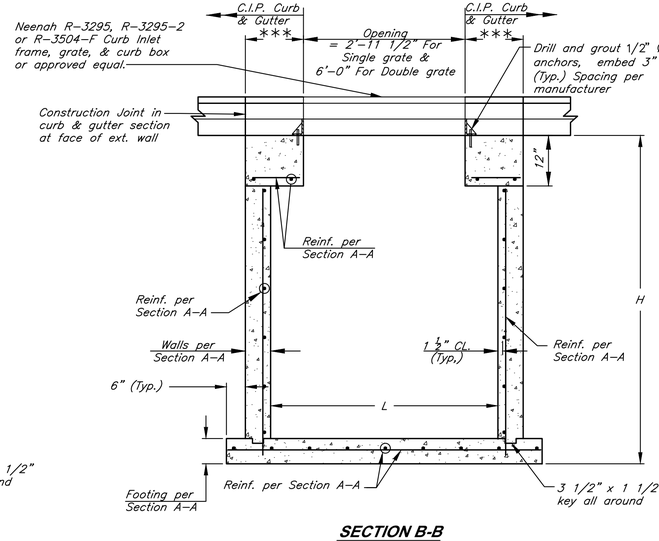
SECTION A-A**

** For boxes H=12'-0" up to H=16'-0"



SECTION A-A***

*** For boxes H=16'-0" up to H=20'-0"



SECTION B-B

*** Center opening in "L" direction

Notes:

All concrete shall be KCMMB 4K.

Floor of inlet shall have a shaped concrete invert to provide for smooth flow.

The minimum dimension between the top of pipe and the top of box shall be 2'-6" (Typical all walls).

Steps shall be C&B 2102, MA Industries PS2-PF or approved equal. (In the event "H" is equal to or greater than 12 feet MA Industries PS2-PF will not be allowed).

Steps shall be spaced 1'-4" O.C. vertically and placed on a wall where there is no pipe penetrating the wall.

Inlet construction notes shall list the "L" dimension first, the "W" dimension second, and the "H" dimension third. The maximum "L" and "W" dimensions are 8 ft and 6 ft., respectively. Any inlet exceeding either dimension shall be considered non-standard, and a detail shall be shown. Any such detail shall be sealed by a licensed Professional Engineer.

All clear distances to reinforcing steel shall be 1-1/2" unless otherwise shown.

Use HILTI HIT HY150 Injection Adhesive Anchor or approved equal for all anchor bolt grouting.

All ingrade inlets shall conform to street grade. All inlets in sump shall be level. Bevel all exposed edges with 3/4" triangular molding.

SPECIAL CURB INLET

Not to Scale

STATE OF MISSOURI
CLINT LOUMASTER
NUMBER PE-2011009651
11/4/2020
REGISTERED PROFESSIONAL ENGINEER

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Lenexa, Kansas 66219
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DATE:	11-4-2020
DESIGN BY:	DJM
DRAWN BY:	CMN
PROJECT NO.:	12720
SHEET NO.	27
TOTAL SHEETS	51

Clint Loumaster
Professional Engineer
License No. PE2011-009651

Street and Storm Sewer Plans
Paragon Parkway
Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing 10/16/2020		

Storm Sewer Details

STATE OF MISSOURI
CLINT LOUMASTER
NUMBER PE-2011009651
11/4/2020
REGISTERED PROFESSIONAL ENGINEER

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engineers
9801 Renner Boulevard
Lenexa, Kansas 66219
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www.gbateam.com

DATE:	11-4-2020
DESIGN BY:	CEL
DRAWN BY:	DRV
PROJECT NO.:	12720
SHEET NO.:	28
TOTAL SHEETS	51

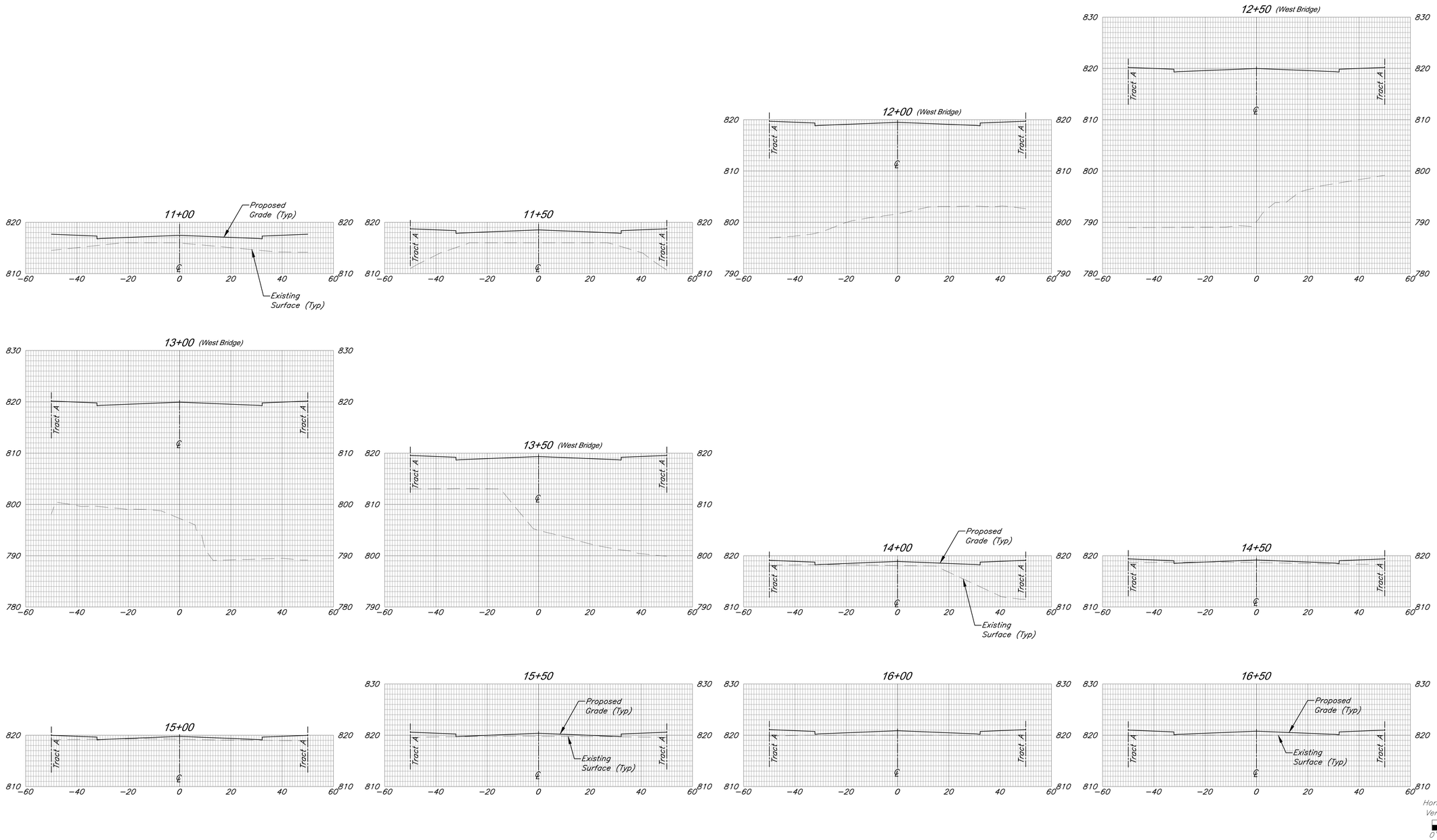
Clint Loumaster
Professional Engineer
License No. PE2011-009651

Street and Storm Sewer Plans

Paragon Parkway

Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing 10/16/2020		



Horizontal Scale: 1" = 20'
Vertical Scale: 1" = 10'

Paragon Pkwy Cross Sections

GBA
architects
engineers
9801 Renner Boulevard
Lenexa, Kansas 66219
913.492.0400
www.gbateam.com

DATE:	11-4-2020
DESIGN BY:	CEL
DRAWN BY:	DRV
PROJECT NO.:	12720
SHEET NO.	29
TOTAL SHEETS	51

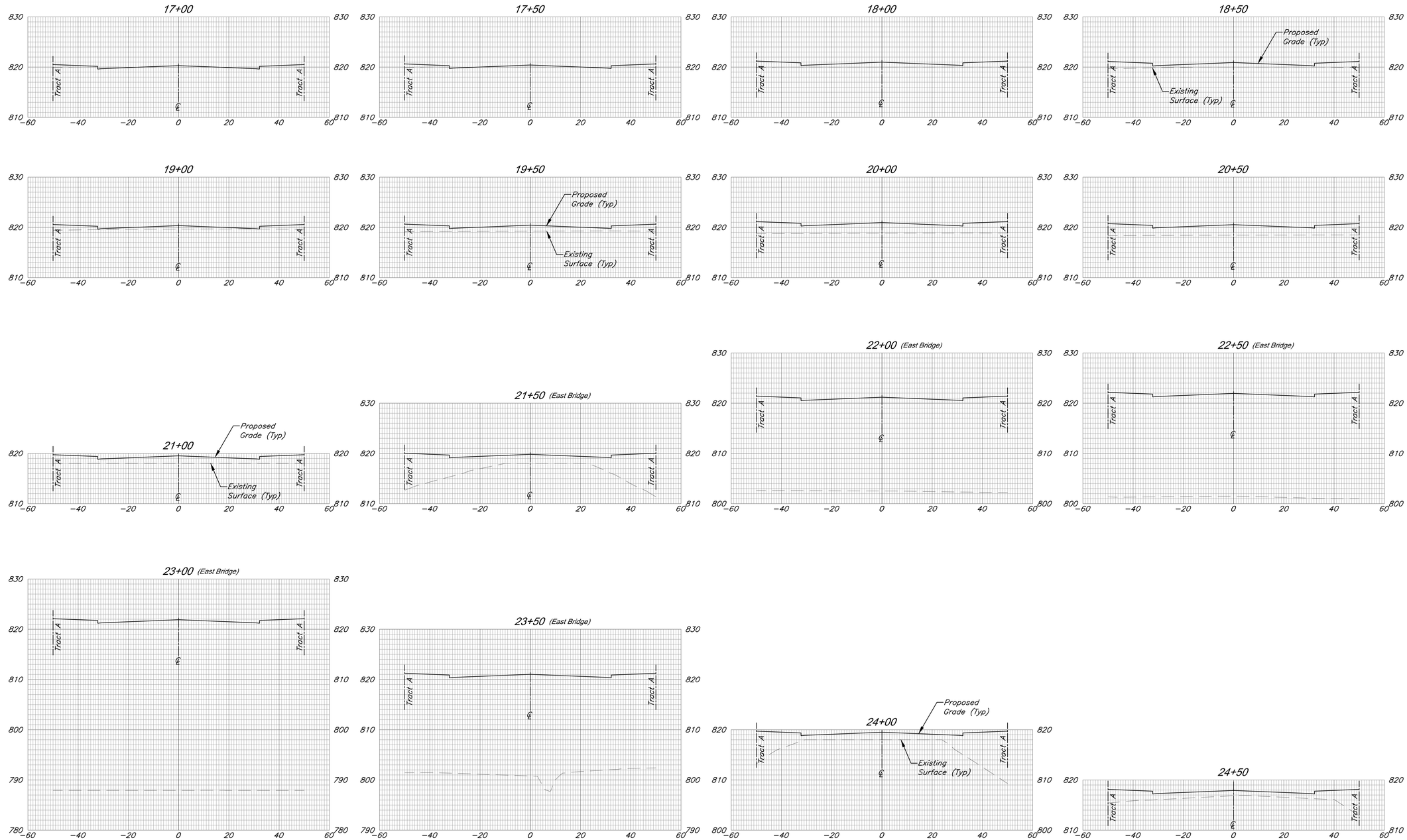
Clint Loumaster
Professional Engineer
License No. PE2011-009651

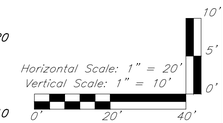
Street and Storm Sewer Plans

Paragon Parkway

Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing 10/16/2020		





Paragon Pkwy Cross Sections

EROSION & SEDIMENT CONTROL STAGING CHART

Project Stage	BMP Plan Ref. No.	BMP Description	May Remove after Stage	Notes
A. Prior to Mass Grading	1	Const. Entrance & Staging Area	C	See Village Plans for Construction Entrance and Concrete Washout
	2	Maintain Existing Orange Construction Fence	C	
	3	Maintain Existing Perimeter Silt Fence	C	
B. Street Construction	4	Inlet Protection	C	
C. Permanent Stabilization*	5	Seed & Mulch or Blanket or Sod		Erosion control blanket to be installed w/ seed. Check approved seeding dates and install temporary stabilization if out of seeding season. Install blanket according to manufacturer's instructions and stapling pattern.

*Permanent Stabilization will be considered stabilized when 100% of disturbed area is established with perennial vegetation with a density of 70%.

Total Disturbed Area = 3.64 Acres

Erosion Control Legend

- Silt Fence / Construction Fence
- 800 — Proposed Contours
- 800 — Existing Contours
- Limits of Disturbance

STATE OF MISSOURI
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NUMBER PE-2011009651
11/4/2020
REGISTERED PROFESSIONAL ENGINEER

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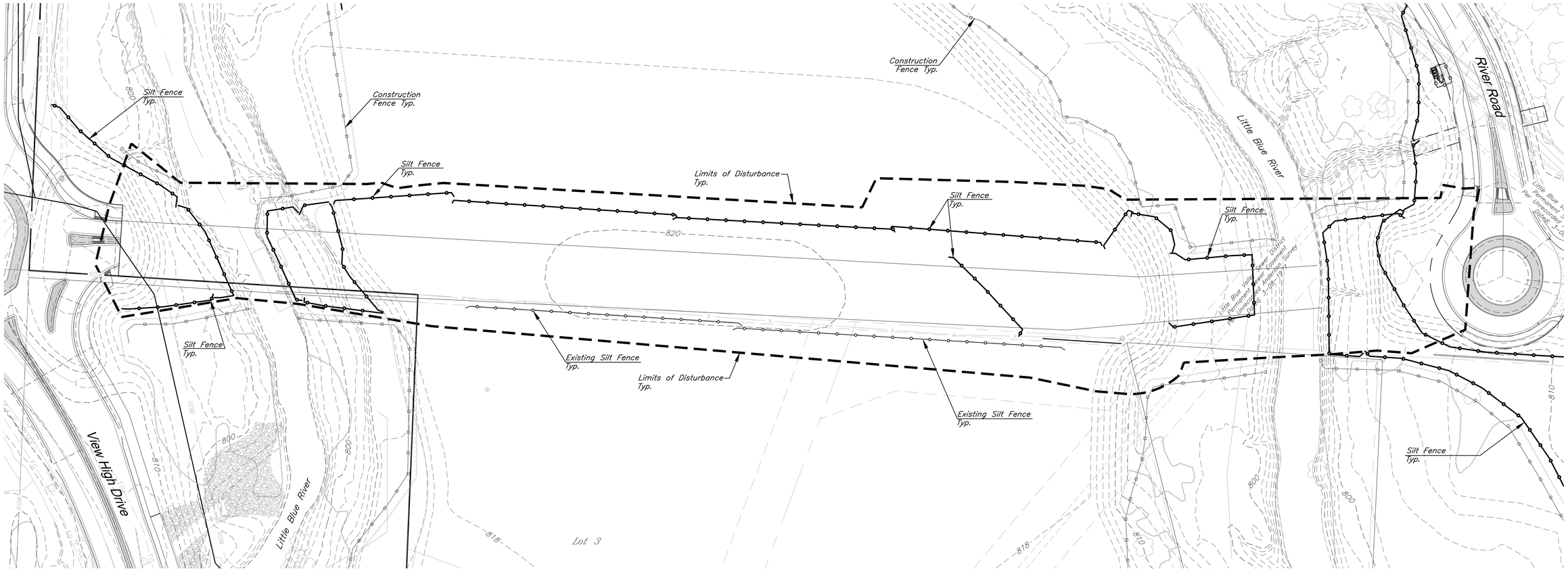
DATE: 11-4-2020
DESIGN BY: DJM
DRAWN BY: CMN
PROJECT NO.: 12720
SHEET NO.: 30
TOTAL SHEETS: 51

Clint Loumaster
Professional Engineer
License No. PE2011-009651

Street and Storm Sewer Plans
Paragon Parkway
Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing 10/16/2020		



Pre-Construction Erosion & Sediment Control Plan-Phase 1

EROSION & SEDIMENT CONTROL STAGING CHART

Project Stage	BMP Plan Ref. No.	BMP Description	May Remove after Stage	Notes
A. Prior to Mass Grading	1	Const. Entrance & Staging Area	C	
	2	Maintain Existing Orange Construction Fence	C	
	3	Maintain Existing Perimeter Silt Fence	C	
B. Street Construction	4	Inlet Protection	C	
C. Permanent Stabilization*	5	Seed & Mulch or Blanket or Sod		Erosion control blanket to be installed w/ seed. Check approved seeding dates and install temporary stabilization if out of seeding season. Install blanket according to manufacturer's instructions and stapling pattern.

*Permanent Stabilization will be considered stabilized when 100% of disturbed area is established with perennial vegetation with a density of 70%.

Erosion Control Legend

- Silt Fence
- Gravel Filter Bags / Inlet Sediment Trap
- 800 — Proposed Contours
- 800 — Existing Contours
- Limits of Disturbance
- Paragon Parkway / Paragon Star Village — Construction Line for Paragon Parkway and Paragon Star Village

STATE OF MISSOURI
CLINT LOUMASTER
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11/4/2020
REGISTERED PROFESSIONAL ENGINEER

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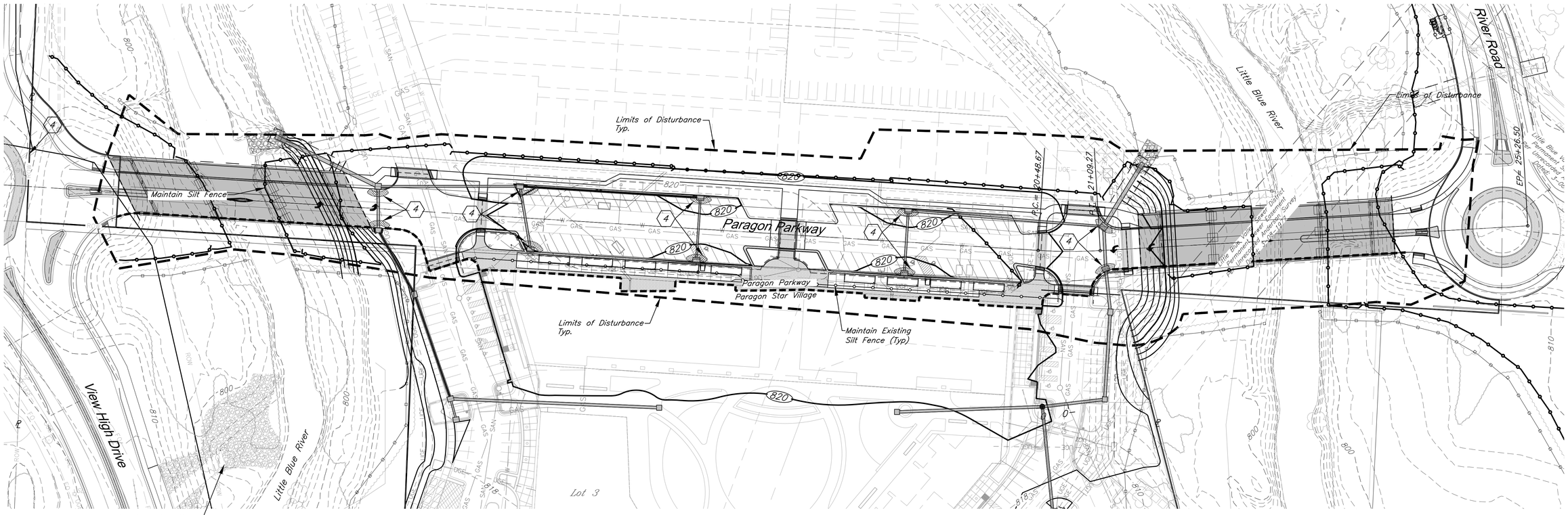
DATE:	11-4-2020
DESIGN BY:	DJM
DRAWN BY:	CMN
PROJECT NO.:	12720
SHEET NO.:	31
TOTAL SHEETS	51

Clint Loumaster
Professional Engineer
License No. PE2011-009651

Street and Storm Sewer Plans
Paragon Parkway
Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing 10/16/2020		



50' 0' 50' 100'
SCALE : 1 INCH = 50 FEET

Erosion & Sediment Control Plan-Phase 2

EROSION & SEDIMENT CONTROL STAGING CHART

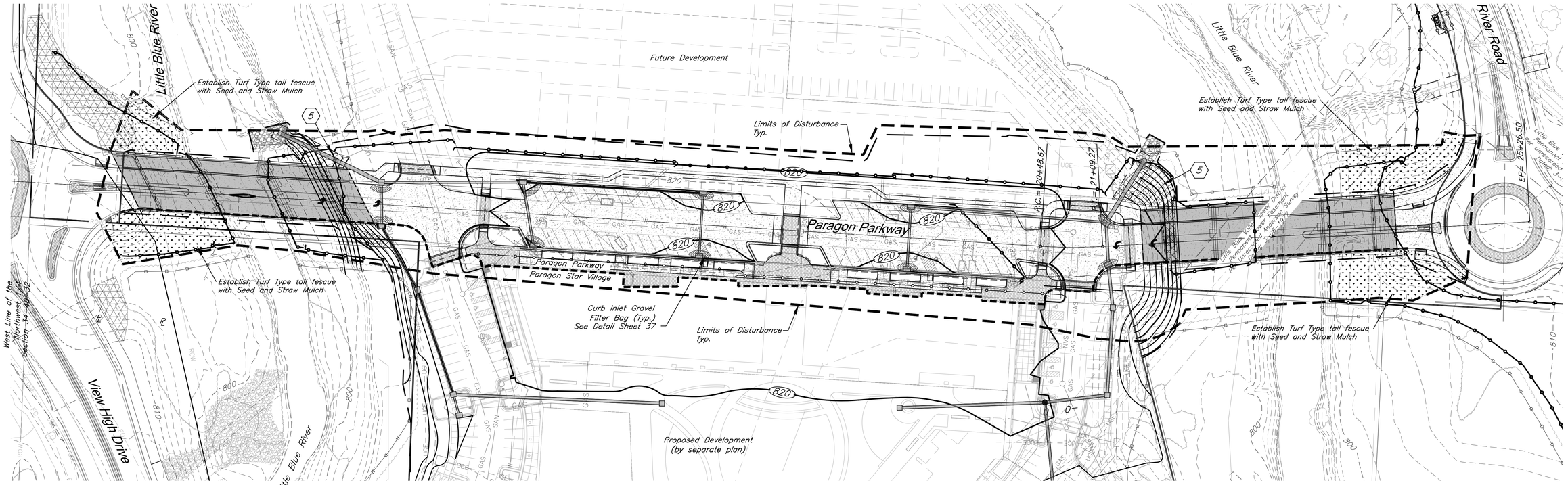
Project Stage	BMP Plan Ref. No.	BMP Description	May Remove after Stage	Notes
A. Prior to Mass Grading	1	Const. Entrance & Staging Area	C	
	2	Maintain Existing Orange Construction Fence	C	
	3	Maintain Existing Perimeter Silt Fence	C	
B. Street Construction	4	Inlet Protection	C	Remove Gravel Filter Bags after Project Stage C. Stabilize all disturbed area in accordance with erosion control notes.
C. Permanent Stabilization*	5	Seed & Mulch or Blanket or Sod		Erosion control blanket to be installed w/ seed. Check approved seeding dates and install temporary stabilization if out of seeding season. Install blanket according to manufacturer's instructions and stapling pattern.

*Permanent Stabilization will be considered stabilized when 100% of disturbed area is established with perennial vegetation with a density of 70%.

Note:
Remove Gravel Filter Bags after Project Stage C. Stabilize all disturbed area in accordance with erosion control notes.

Erosion Control Legend

- Silt Fence
- Gravel Filter Bags Inlet Sediment Trap
- 800 — Proposed Contours
- — — 800 — — — Existing Contours
- Limits of Disturbance
- Paragon Parkway / Paragon Star Village — Construction Line for Paragon Parkway and Paragon Star Village
- Erosion Control Blanket North American Green SC150BN or approved equal
- Establish Turf Type tall fescue with Seed and Straw Mulch



50' 0' 50' 100'
SCALE : 1 INCH = 50 FEET

Erosion & Sediment Control Plan-Phase 3

STATE OF MISSOURI
CLINT LOUMASTER
NUMBER PE-2011009651
11/4/2020
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DATE:	11-4-2020
DESIGN BY:	DJM
DRAWN BY:	CMN
PROJECT NO.:	12720
SHEET NO.	32
TOTAL SHEETS	51

Clint Loumaster
Professional Engineer
License No. PE2011-009651

Street and Storm Sewer Plans
Paragon Parkway
Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
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Legend

- Stream Buffer
- Existing Floodway
- Proposed Floodway
- Ordinary High Water Mark

200' 0' 200' 400'

SCALE : 1 INCH = 200 FEET

Floodway & Floodplain Plan

STATE OF MISSOURI
CLINT LOUMASTER
NUMBER PE-2011009651
11/4/2020
REGISTERED PROFESSIONAL ENGINEER

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EROSION AND SEDIMENT CONTROL NOTES

The layout of erosion control best management practices (BMPs) shown on the engineering plans is intended to control erosion and minimize, if not eliminate, the transport of sediment from the disturbed areas. The Contractor shall be responsible for the evaluation of existing surface drainage patterns and for making adjustments to the BMP locations to best control erosion and minimize, if not eliminate, the transport of sediment from the disturbed areas. The following are measures to achieve the control of erosion and sediment.

1. Stabilization Practices – Stabilization practices are very effective at preventing erosion by shielding the soil surface from the impact of rain, slowing the velocity of runoff, holding soils in place, and increasing infiltration of runoff and allowing the soil to absorb more rainfall.

   a. Temporary Seeding Stabilization – During acceptable growing periods (see Table 1 below); temporary seeding of annual vegetation with a straw mulch cover shall be used as a temporary cover until permanent vegetation is established. If there is a possibility that a vegetative cover will be required to control erosion for more than 1 year, then consider the addition of a perennial/permanent grass species as part of a seeding mixture.

Table 1. Temporary Seeding Dates and Minimum Application Rates

Seeding Dates	Temporary Seed Species	Minimum Application Rates (pure live seed lbs. per acre)	Straw Mulch (tons per acre)
Jan. 1 – Jan. 31	None	Not Applicable	2.5
Feb. 1 – May 31	Annual Ryegrass	120	1.5
June 1 – Aug.4	None	Not Applicable	2.5
Aug. 15 – Nov. 15	Cereal/Winter Rye	120	1.5
Nov. 16 – Dec. 31	None	Not Applicable	2.5

Seedbed Preparation – For broadcast seeding or drilling, loosen soil to depth of 3 inches. For no till drilling, loosen soil if it is compacted. Loosen compacted, hard or crusted soil surfaces with a disk, ripper, chisel, harrow or other tillage equipment. Avoid preparing the seedbed under excessively wet conditions. For establishment and long-term growth, apply a complete fertilizer at rates recommended by soil tests or as specified in plans and specifications. If soil pH is less than 6.0, apply lime according to soil tests. Incorporate necessary lime and fertilizer to a depth of 3 to 6 inches of soil.

Installation – For the best results use certified seed. Apply seed uniformly using a cyclone seeder, drop-type spreader, drill, cultipacker seeder or hydroseeder. When using a drill seeder, plant rye or other grains about 1 inch deep and plant grasses no more than ½ inch. A vegetative straw mulch cover shall be applied over the seed mixture to help germinate and establish plant cover, control weeds, and protect seed mixture against temperature extremes. Follow straw mulch preparation and application procedures described herein.

   b. Temporary Mulch Stabilization – During non-growing periods, a straw mulch cover shall be applied in unseeded areas to protect against erosion until temporary or permanent vegetation is established.

Site Preparation – Divert runoff water from areas above the site that will be mulched. Remove stumps, roots and other debris from the construction area. Grade area as needed to permit the use of equipment for seeding, mulching and maintenance. Shape area so that it is relatively smooth.

Application – Spread straw mulch uniformly over the area with a power blower, hydroseeder, or by hand. No more than 25% of the ground surface should be visible after spreading. Apply straw mulch at a rate of 1.5 tons per acre as a seed cover or 2.5 tons per acre as a stand alone cover. The straw should be dry, unchopped, unweathered; free of weed seeds and rot. In areas of steep slopes or high winds, or in critical areas such as swales, mulching may need to be secured to the ground with a binder, netting, or tacking.

   c. Permanent Seeding Stabilization – All disturbed areas shall be permanently seeded with a cool season grass mixture as specified in the Standards and Specifications of the City of Lee's Summit, Missouri..

Seedbed Preparation – loosen soil to depth of 3 inches. For no till drilling, loosen soil if it is compacted. Loosen compacted, hard or crusted soil surfaces with a disk, ripper, chisel, harrow or other tillage equipment. Avoid preparing the seedbed under excessively wet conditions. For establishment and long-term growth, apply a complete fertilizer at rates recommended by soil tests or as specified in plans and specifications. If soil pH is less than 6.0, apply lime according to soil tests. Incorporate necessary lime and fertilizer to a depth of 3 to 6 inches of soil.

Installation – For the best results use certified seed. Apply seed uniformly using a hydroseeder. A vegetative straw mulch cover shall be applied over the seed mixture to help germinate and establish plant cover, control weeds, and protect seed mixture against temperature extremes. Follow straw mulch preparation and application procedures described in the Standards and Specifications of the City of Lee's Summit, Missouri.

2. Structural Practices

   a. Silt Fence – A temporary sediment barrier consisting of a geotextile fabric shall be installed as shown on the attached engineering plans and details. Silt fencing shall be installed to maintain sediment onsite.

      Minimum Requirements:

      Location – Fence should be built on a nearly level grade and at least 10 feet from the toe of the slope to provide a broad shallow sediment pool. Install on the contour, where fence can intercept runoff as a sheet flow; not located crossing channels, waterways or other concentrated flow paths; not attached to existing trees.

      Spacing of Support Posts – 10 feet maximum for fence supported by wire; 6 feet maximum for high strength fabric without supportive wire backing. Support posts should be driven into the ground a minimum of 10 inches deep.

      Trench – Bottom 1 foot of fence must be buried minimum of 4 inches deep.

   b. Inlet Protection – When installation of the storm drainage system is complete, gravel curb inlet sediment traps will be placed at the drainage system inlets. Construction shall be in accordance with attached engineering plans and details.

   c. Stockpiles – The toe of stockpiles shall be placed a minimum of 10 feet from erosion control measures. If stockpiles are to remain for more than 14 days, they shall be temporarily stabilized with vegetative mulch and temporary seeding.

3. Maintenance – The contractor shall repair all erosion control measures or re-seed areas that are disturbed or damaged as a result of weather or other situations, within 2 days after the occurrence. This will include all areas bare of vegetation.

EROSION CONTROL GENERAL NOTES

1. The Contractor is responsible for erosion control during construction and until the Owner and City accepts the work as complete. The erosion control measures shown on this plan are a typical minimum installation. The Contractor shall be responsible for adjusting or adding to these measures as necessary during the phasing of the construction to assure adequate control.

2. Clearing and grubbing within 50' of a defined drainage course should be avoided when possible. Where changes to a defined drainage course occur, work should be delayed until all materials and equipment necessary to protect and complete the drainage change are on site. Changes shall be completed as quickly as possible once the work has been initiated. The area impacted by the construction activities shall be revegetated or protected from erosion as soon as possible, areas within 50' of a defined drainage ways should be recontoured as needed or otherwise protected within five (5) working days after grading has ceased.

3. Where soil disturbing activities cease in an area for more than 14 days, the disturbed areas shall be protected from erosion by stabilizing the area with mulch or other similarly effective erosion control measures. If the slope of the area is greater than 3:1 or if the slope is greater than 3% and greater than 150 feet in length, then the disturbed areas shall be protected from erosion by stabilizing the area with mulch or other similarly effective erosion control measures if activities cease for more than seven (7) days.

4. Existing vegetation shall be preserved to the extent and where practical. In no case shall disturbed areas remain without vegetative ground cover for a period in excess of 60 days.

5. Additional site management practices which shall be adhered to during the construction process shall include:

   –Solid and hazardous waste management including providing trash containers and regular site clean up for proper disposal of solid waste such as building and construction material, product/material shipping waste, food containers and cups, and providing containers for the proper disposal of waste paints solvents, and cleaning compounds.

   –Provisions of portable toilets for proper disposal of sanitary sewage.

   –Storage of construction materials away from drainage courses and low areas.

   –Installation of containment berms and use of drip pans at petroleum product and liquid storage tanks and containers.

6. All disturbed areas shall be seeded, fertilized and mulched, or sodded, in accordance with the Standards and Specifications adopted by the City of Lee's Summit, Missouri and good engineering practices. This shall be completed within fourteen (14) days after completing the work, in any area. If this is outside of the seeding period, silt barriers or other similarly effective measures shall be provided until such time that the areas can be seeded.

7. All erosion control measures, temporary or permanent, require maintenance to preserve their effectiveness. All erosion control devices shall be inspected immediately after each heavy rainstorm and at least daily during prolonged rainfall. Any required repairs should be made immediately. All costs associated with the repair work including related incidentals will be the contractor's responsibility and shall be included in the Contractor's bid for the proposed work. Only after the project is complete and accepted can the erosion control be removed.

8. Seeding shall be done before the proposed seedbed becomes eroded, crusted over, or dried out and shall not be done when the ground is frozen, or covered with snow. The seed shall comply with requirements of the Missouri Seed Law and the Federal Seed Act. Also, it shall contain no seed of any plant on the Federal Noxious Weed List. Other weed seed shall not exceed one percent by weight of mix.

9. During the dates Dec. 15 through May 30 ALL lime, fertilizer, seed, and mulch shall be applied to finished slopes of disturbed areas. During the months of June, July, October, and November 1st through December 15th, lime, fertilizer, seed, and mulch shall be applied at the following rates:

   Lime – 100% of the specified quantity
   Fertilizer – 75% of the specified quantity
   Seed – 50% of the specified quantity
   Mulch – 100% of the specified quantity

10. Mulch shall be Vegetative type, cereal straw form stalks of oats, rye, or barley, or approved equal. The straw shall be free of prohibited weed seed and relatively free of all other noxious and undesirable seed. Apply straw mulch at a rate of 1.5 tons per acre as a seed cover or 2.5 tons per acre as a stand alone cover. Mulch shall be embedded by a mulch anchoring tool or disk type roller having flat serrated disks spaced not more than 10 inches apart and cleaning scrapers shall be provided.

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DATE:	11-4-2020
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SHEET NO.	34
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Clint Loumaster
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License No. PE2011-009651

Street and Storm Sewer Plans
Paragon Parkway
Lee's Summit, Missouri

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Erosion Control Notes

STATE OF MISSOURI
CLINT LOUMASTER
NUMBER PE-2011009651
11/4/2020
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DATE:	11-4-2020
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Street and Storm Sewer Plans
Paragon Parkway
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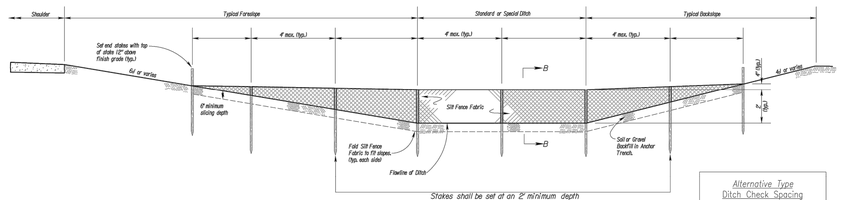
Notes for Silt Fence Ditch Check:

1. Stakes shall be 4' (min.) long and one of the following materials:
   a. Hardwood – 1 ½" x 1 ½";
   b. Southern Pine (No. 2) – 2 ⅜" x 2 ⅜";
   c. Steel U, T, L, or C Section – .95 lbs. per 1'-0";
   d. Synthetic – same strength as wood stakes.
2. Cross pieces shall be of same material as stakes.
3. Attach fence fabric securely on 6" centers (max.).
4. Use of high flow material is acceptable.
5. Refer to plan sheets to estimate the length of silt fence required.
6. Use support fencing when tributary area is greater than 2.4 acres or when ditch gradient is greater than 2 percent.
7. Silt fence sliced in to a 6" minimum depth.
8. Elevation at tie in points shall be a minimum of 4" higher than the center.

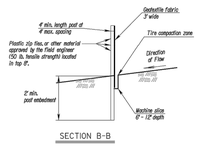


TYPICAL ELEVATION

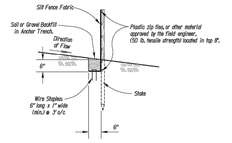
Alternative Type Ditch Check Spacing

Ditch Centerline Slope (%)	Spacing Interval (Feet)
1.0	200
2.0	100
3.0	65
4.0	50
5.0	40
6.0	33

Note: Use this spacing for all except Rock Ditch Checks.



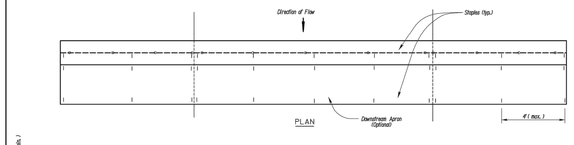
SECTION B-B



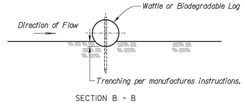
SILT FENCE DITCH CHECK
NO SCALE

Notes for Wattles and Biodegradable Log Ditch Check:

1. Use as many biodegradable log sections as necessary to ensure water does not flow around end of ditch check.
2. Overlap sections a minimum of 18"
3. Stakes shall be per manufacturer's instructions. Length of stakes shall be a minimum of 2 times the diameter of the log or 24" minimum.
4. Use Erosion Control (Class 1) (Type C) as the downstream apron when directed by the Engineer.
5. Use 9" diameter logs when used with Erosion Control (Class 2) (Any Type) channel lining. Smaller diameter logs may be used with Erosion Control (Class 2) (Any Type) channel lining as directed by the Engineer.



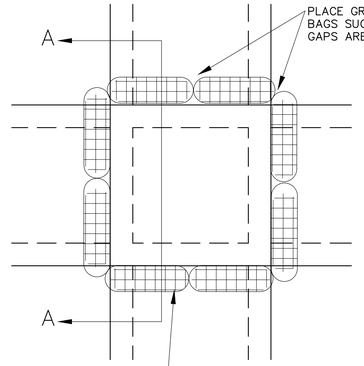
TYPICAL ELEVATION



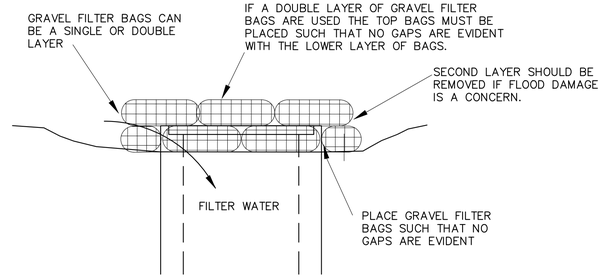
SECTION B - B

WATTLES OR BIODEGRADABLE LOG DITCH CHECKS
OR Filter Sock Ditch Check
NO SCALE
Modified from Kansas Department of Transportation Standard Details for Erosion Control and Sediment Control.

AMERICAN PUBLIC WORKS ASSOCIATION	
KANSAS CITY METRO CHAPTER	
SILT FENCE AND WATTLE/ BIODEGRADABLE LOG DITCH CHECKS	STANDARD DRAWING NUMBER ESC-09
	ADOPTED: 10/24/2016

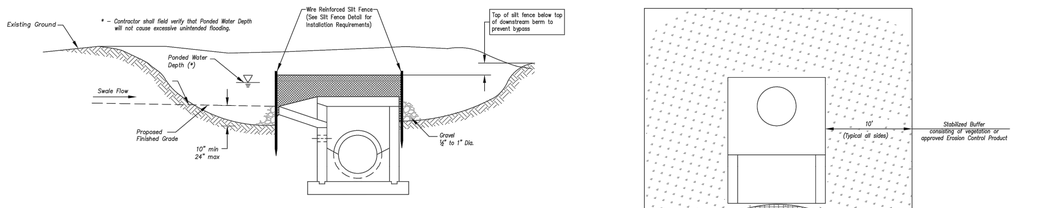


3/4-INCH GRAVEL CONTAINED IN PERVIOUS BURLAP BAGS OR SYNTHETIC NET BAGS (1/8-INCH MESH) APPROXIMATELY 24 INCHES LONG, 12 INCHES WIDE, AND 6 INCHES (i.e. CURB HEIGHT) HIGH.

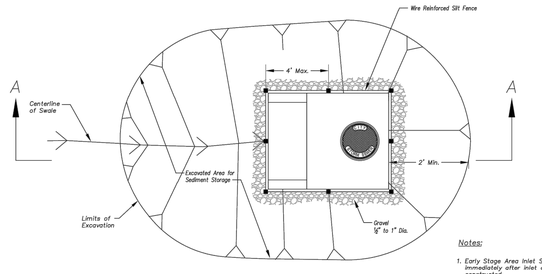


CROSS-SECTION AA

GRAVEL INLET PROTECTION DETAIL



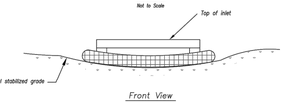
Section A-A
Not to Scale



Plan
Not to Scale

EARLY STAGE AREA INLET
(All open boxes and inlets not at final grade)

Plan
Not to Scale



Front View

LATE STAGE AREA INLET
(Area inlets at final grade and existing inlets)

Notes:

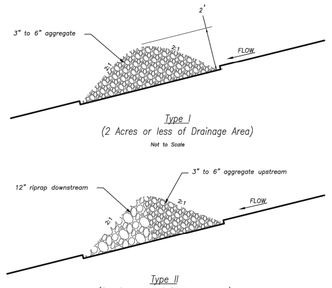
1. Early Stage Area Inlet Sediment Barrier to be installed immediately after inlet or junction box is constructed.
2. Silt fence shall remain in place until excavated area is removed and Late Stage Area Inlet is being installed.
3. Backfill excavated area ONLY after final grading of the site. Stabilization of the site is to immediately follow.
4. Wire reinforced silt fence may be used in place of silt fence attached to wood frame.

Maintenance:

1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
3. Repair or replace as necessary to maintain function and integrity of installation.

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

AMERICAN PUBLIC WORKS ASSOCIATION	
KANSAS CITY METRO CHAPTER	
AREA INLET AND JUNCTION BOX PROTECTION	STANDARD DRAWING NUMBER ESC-07
	ADOPTED: 10/24/2016

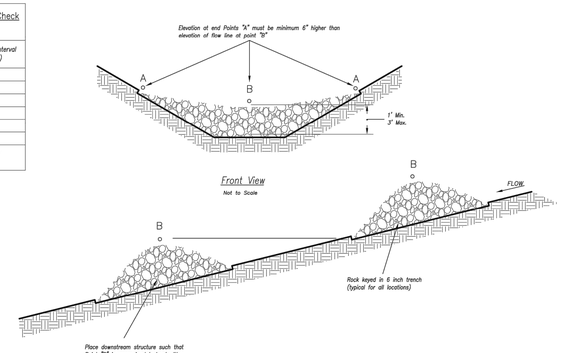


ROCK DITCH CHECK

Temporary Rock Ditch Check Spacing

Ditch Centerline Slope (%)	Spacing Interval (Feet)
5.0	60
6.0	50
7.0	43
8.0	36
9.0	33
10.0	29

Note: Use this spacing only for Rock Ditch Checks.



Spacing Between Check Dams (all types)
Not to Scale

Notes:

1. Rock check dams shall be used only for drainage areas less that 10 acres unless approved by the City Engineer.
2. Use rock checks only in situations where the ditch slope exceeds 6%.

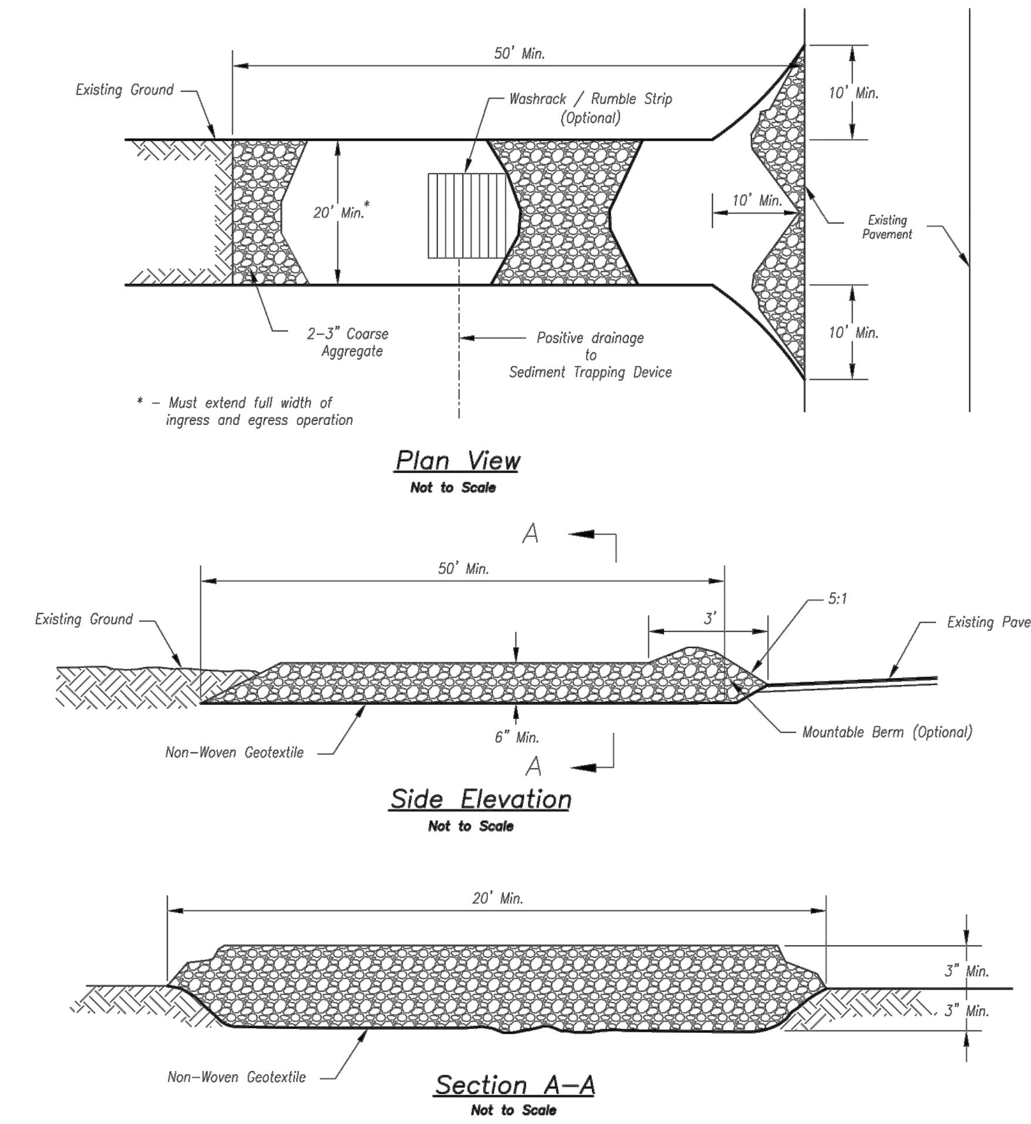
Maintenance:

1. Remove and dispose of sediment deposits when the deposit approaches ½ the height of the ditch check.
2. Replace and reshape as necessary to maintain function and integrity of installation.

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

AMERICAN PUBLIC WORKS ASSOCIATION	
KANSAS CITY METRO CHAPTER	
ROCK DITCH CHECKS	STANDARD DRAWING NUMBER ESC-10
	ADOPTED: 10/24/2016

Erosion Control Details



Notes for Construction Entrance:

1. Avoid locating on steep slopes, at curves on public roads, or downhill of disturbed area.
2. Remove all vegetation and other unsuitable material from the foundation area, grade, and crown for positive drainage.
3. If slope towards the public road exceeds 2%, construct a 6– to 8–inch high ridge with 3H:1V side slopes across the foundation approximately 15 feet from the edge of the public road to divert runoff from it.
4. Install pipe under the entrance if needed to maintain drainage ditches along public roads.
5. Place stone to dimensions and grade as shown on plans. Leave surface sloped for drainage.
6. Divert all surface runoff and drainage from the entrance to a sediment control device.
7. If conditions warrant, place geotextile fabric on the graded foundation to improve stability.

Maintenance for Construction Entrance:

1. Reshape entrance as needed to maintain function and integrity of Installation. Top dress with clean aggregate as needed.

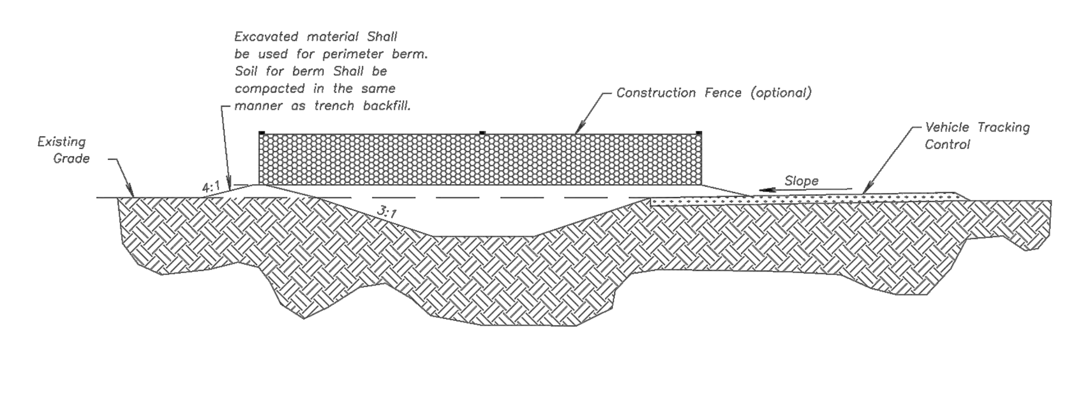
CONSTRUCTION ENTRANCE

Notes for Concrete Washout:

1. Concrete washout areas shall be installed prior to any concrete placement on site.
2. Concrete washout area shall include a flat subsurface pit sized relative to the amount of concrete to be placed on site. The slopes leading out of the subsurface pit shall be 3:1. The vehicle tracking pad shall be sloped towards the concrete washout area.
3. Vehicle tracking control is required at the access point to all concrete washout areas.
4. Signs shall be placed at the construction site entrance, washout area and elsewhere as necessary to clearly indicate the location(s) of the concrete washout area(s) to operators of concrete truck and pump rigs.
5. A one–piece impervious liner may be required along the bottom and sides of the subsurface pit in sandy or gravelly soils.

Maintenance for Concrete Washout:

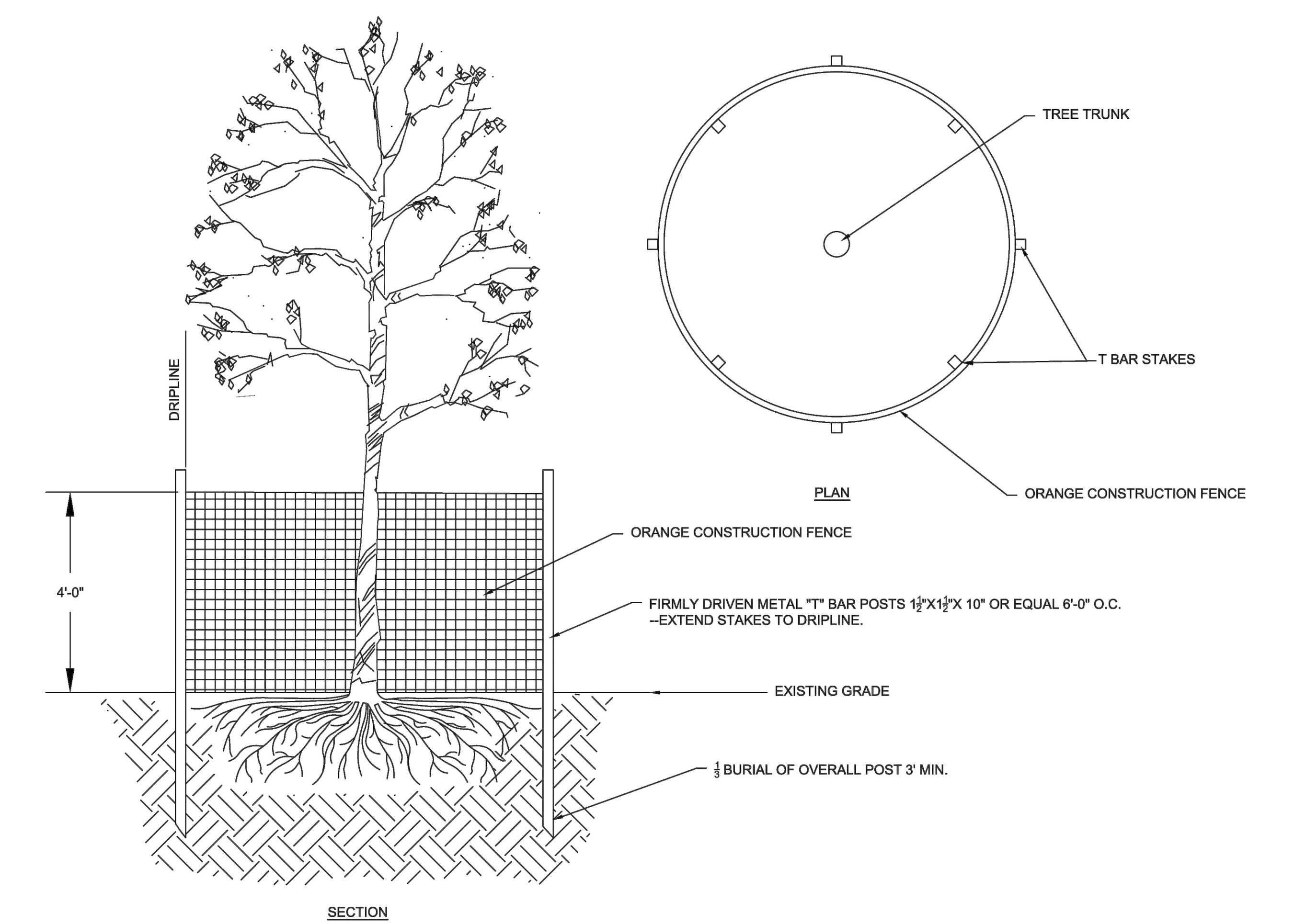
1. Concrete washout materials shall be removed once the materials have filled the washout to approximately 75% full.
2. Concrete washout areas shall be enlarged as necessary to maintain capacity for wasted concrete.
3. Concrete washout water, wasted pieces of concrete and all other debris in the subsurface pit shall be transported from the job site in a water–tight container and disposed of properly.
4. Concrete washout areas shall remain in place until all concrete for the project is placed.
5. When concrete washout areas are removed, excavations shall be filled with suitable compacted backfill and topsoil, any disturbed areas associated with the installation, maintenance, and/or removal of the concrete washout areas shall be stabilized.



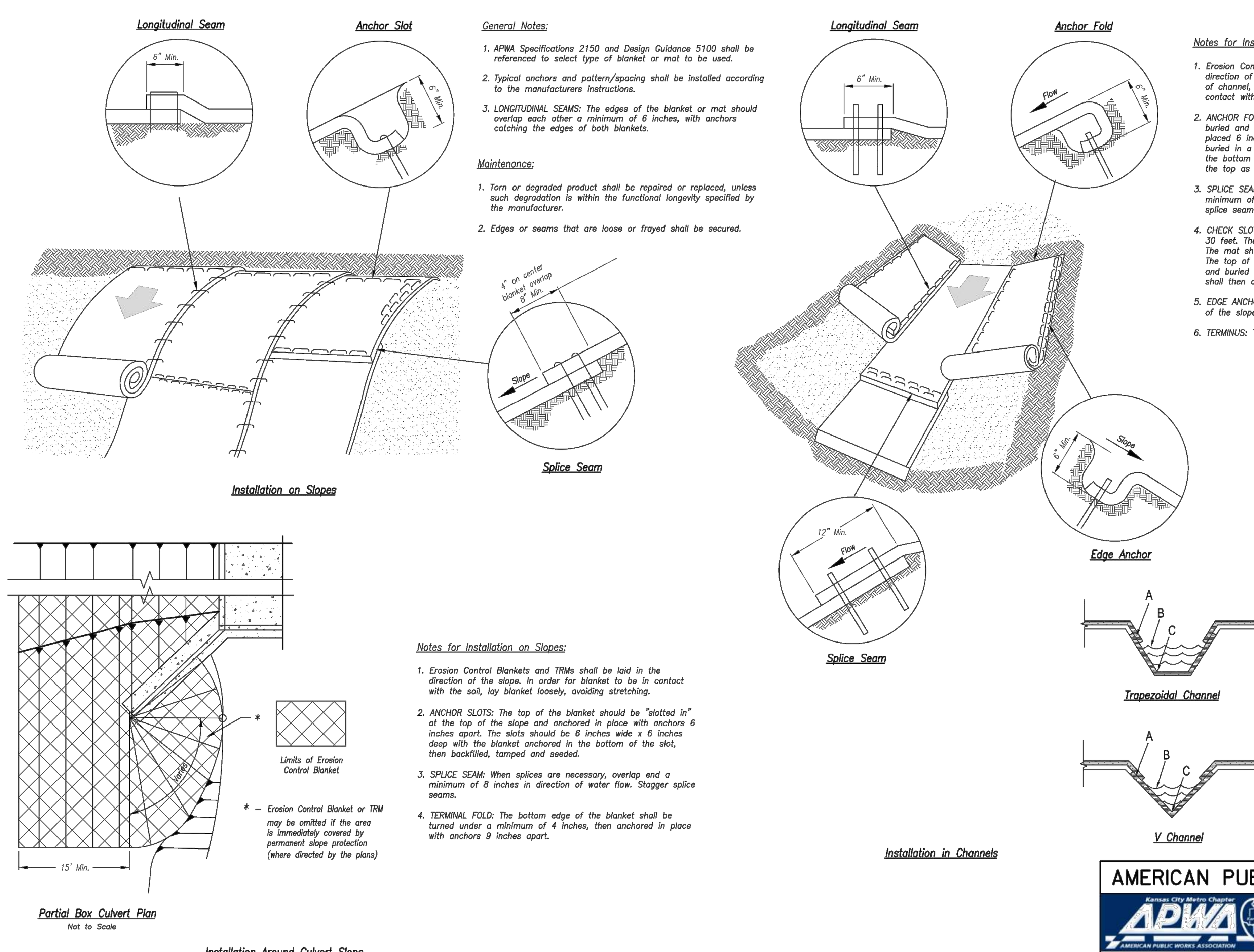
CONCRETE WASHOUT

Construction Entrance modified from 2015 Overland Park Standard Details for Erosion and Sediment Control; Concrete Washout modified from 2009 City of Great Bend Standard Drawings.

AMERICAN PUBLIC WORKS ASSOCIATION
KANSAS CITY METRO CHAPTER
CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT
STANDARD DRAWING NUMBER ESC-01
ADOPTED: 10/24/2016



TREE PRESERVATION



General Notes:

1. APWA Specifications 2150 and Design Guidance 5100 shall be referenced to select type of blanket or mat to be used.
2. Typical anchors and pattern/spacing shall be installed according to the manufacturers instructions.
3. LONGITUDINAL SEAMS: The edges of the blanket or mat should overlap each other a minimum of 6 inches, with anchors catching the edges of both blankets.

Maintenance:

1. Torn or degraded product shall be repaired or replaced, unless such degradation is within the functional longevity specified by the manufacturer.
2. Edges or seams that are loose or frayed shall be secured.

Notes for Installation in Channels:

1. Erosion Control Blankets and TRMs shall be laid in the direction of the flow, with the first course at the centerline of channel, where applicable. In order for the mat to be in contact with the soil, lay the mat loosely, avoiding stretching.
2. ANCHOR FOLD: The top of the mat should be folded under, buried and secured with wood or other approved anchors placed 6 inches apart. The top edge of the mat should be buried in a slot 6 inches wide x 6 inches deep, anchored in the bottom of the slot, backfilled, and the mat folded over the top as shown in detail.
3. SPLICE SEAM: When splices are necessary, overlap end a minimum of 12 inches in direction of water flow. Stagger splice seams.
4. CHECK SLOTS: Establish check slots transverse to slope every 30 feet. The slots should be 6 inches wide x 6 inches deep. The mat shall be cut to a length 12 inches beyond the slot. The top of the downstream mat shall be slotted in, secured and buried similar to the edge anchor fold. The upstream mat shall then cover the slot and be anchored as shown.
5. EDGE ANCHORS: Lay outside edge of mat into trench at top of the slope and anchor.
6. TERMINUS: The bottom edge of the mat shall be anchored.

Notes for Installation on Slopes:

1. Erosion Control Blankets and TRMs shall be laid in the direction of the slope. In order for blanket to be in contact with the soil, lay blanket loosely, avoiding stretching.
2. ANCHOR SLOTS: The top of the blanket should be "slotted in" at the top of the slope and anchored in place with anchors 6 inches apart. The slots should be 6 inches wide x 6 inches deep with the blanket anchored in the bottom of the slot, then backfilled, tamped and seeded.
3. SPLICE SEAM: When splices are necessary, overlap end a minimum of 8 inches in direction of water flow. Stagger splice seams.
4. TERMINAL FOLD: The bottom edge of the blanket shall be turned under a minimum of 4 inches, then anchored in place with anchors 9 inches apart.

Trapezoidal Channel

V Channel

Critical Points:

A – Overlaps and seams;

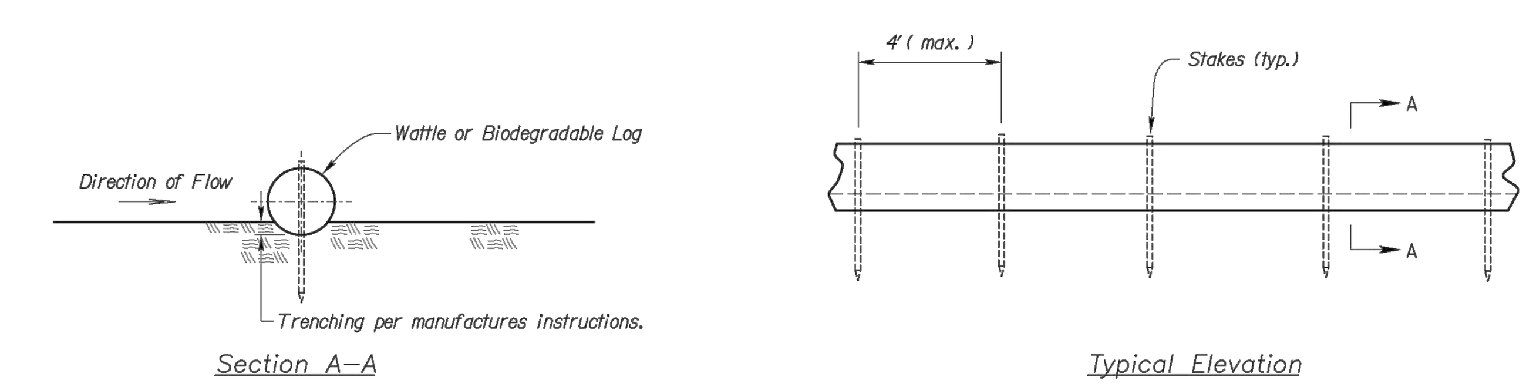
B – Projected water line;

C – Channel bottom / side slope vertices;

Installation in Channels

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

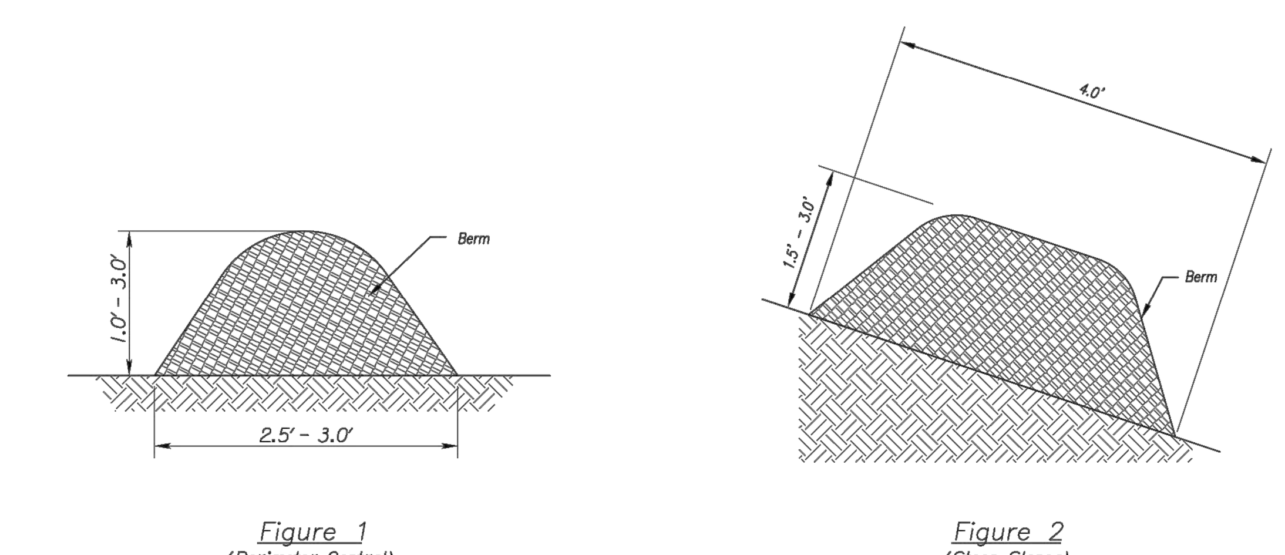
AMERICAN PUBLIC WORKS ASSOCIATION
KANSAS CITY METRO CHAPTER
EROSION CONTROL BLANKETS AND TURF REINFORMENT MATS
STANDARD DRAWING NUMBER ESC-02
ADOPTED: 10/24/2016



WATTLES AND BIODEGRADABLE LOG

Notes for Wattles and Biodegradable Log Slope Protection:

1. The Slope barriers shall be placed along contour lines, with a short section turned upgrade at each end of the barrier. The maximum length of the slope barrier shall not exceed 250 feet, and the barrier ends need to be staggered.
2. Install wattles and biodegradable logs per manufacturer's instructions.
3. Spacing of stakes per manufacturer's instructions with 4' max. spacing. Length of stakes shall be a minimum of 2 times the diameter of the log with minimum of 24".



MULCH OR COMPOST FILTER BERMS

Notes for Mulch and Compost Filter Beam:

1. The sediment control berm shall be placed uncompacted in a windrow at locations shown on the plans or as directed by the engineer.
2. Parallel to the base of the slope, or around the perimeter of other affected areas, construct a 1 to 3 foot high by 2.5 to 3 foot wide berm (see Figure 1). For maximum water treatment ability or for steep slopes, construct a 1.5 to 3 foot high trapezoidal berm that is a minimum of 4 feet wide at the base (see Figure 2). In extreme conditions, or where specified by the engineer, a second berm shall be constructed at the top of the slope. Engineer will specify berm requirements.
3. If berm is to be left as permanent or part of the natural landscape, the compost berm may be seeded during application for permanent vegetation.
4. Do not use compost or wood mulch berms in any runoff channels or concentrated flow areas.
5. Wood mulch shall consist of tree and shrub debris resulting from clearing and grubbing and shall be ground by the mechanical means such as a chipper, hammermill, tub grinder or other approved method. Mulch sizing varies with a maximum width of 2" and a maximum length of 10".

Maintenance for Mulch and Compost Filter Beam:

1. Berm shall be reshaped and material added as necessary to maintain function and dimensions.
2. Breaches in the berm shall be repaired promptly.

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

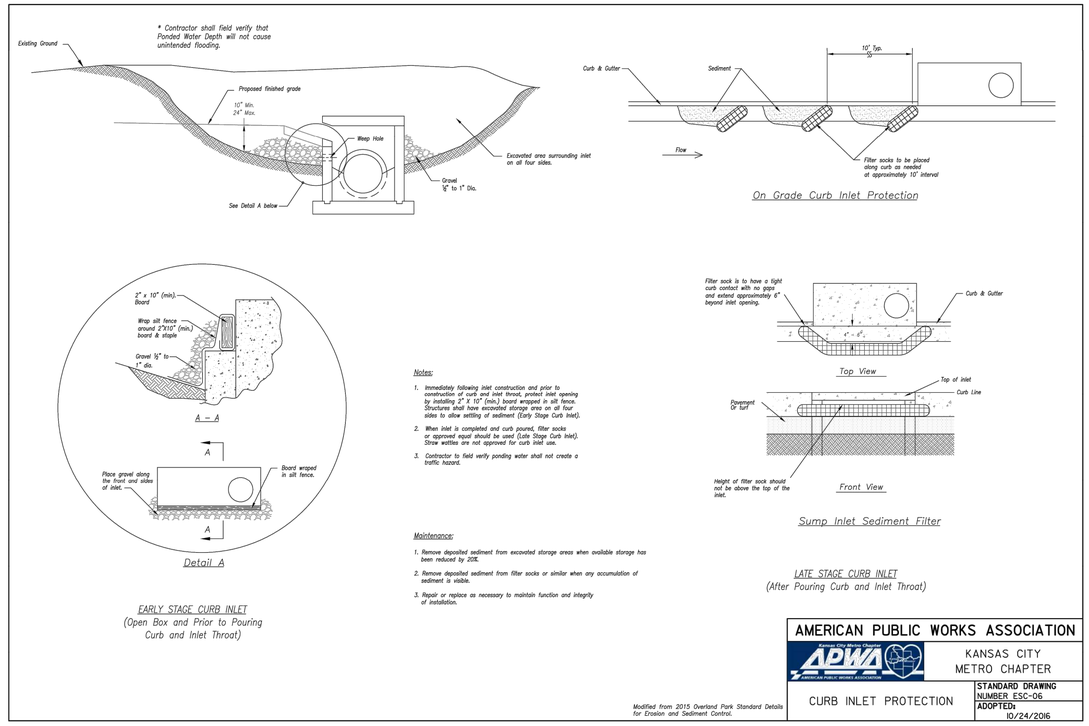
AMERICAN PUBLIC WORKS ASSOCIATION
KANSAS CITY METRO CHAPTER
WATTLES/BIODEGRADABLE LOG AND MULCH/COMPOST FILTER BERM
STANDARD DRAWING NUMBER ESC-04
ADOPTED: 10/24/2016

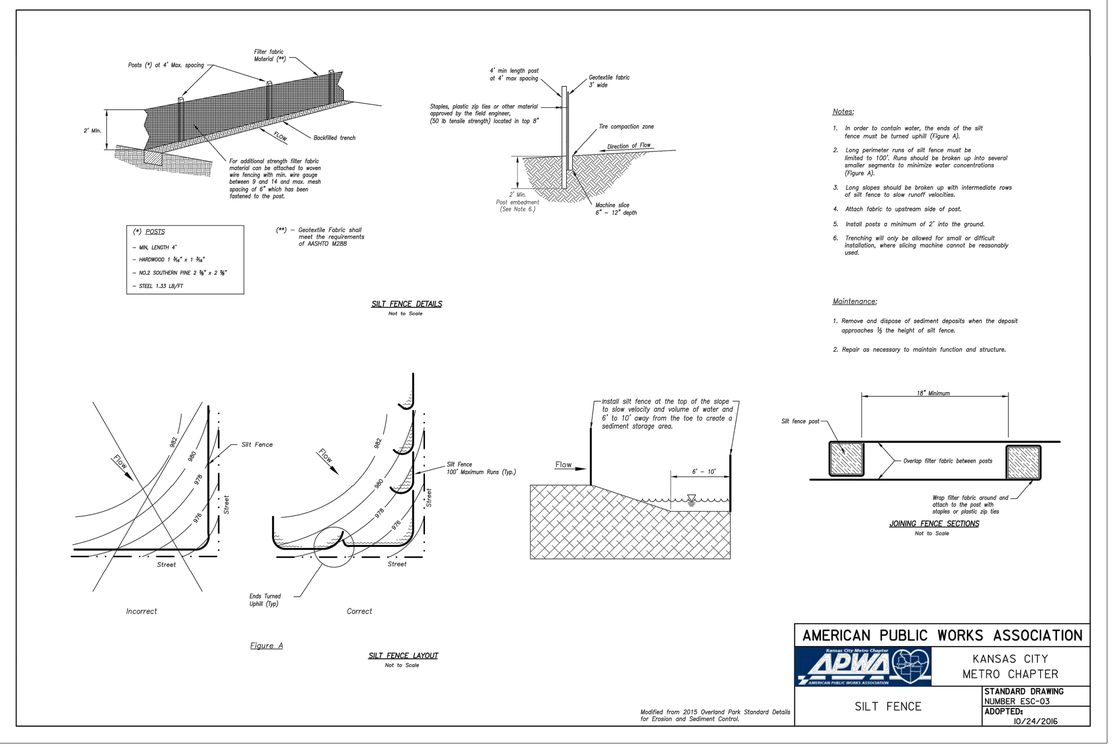
Erosion Control Details

STATE OF MISSOURI – CLINT LOUMASTER – NUMBER PE-2011009651 – 11/4/2020 – REGISTERED PROFESSIONAL ENGINEER	GBA architects engineers 9801 Renner Boulevard Lenexa, Kansas 66219 913.492.0400 www.gbateam.com
Clint Loumaster Professional Engineer License No. PE2011-009651	Street and Storm Sewer Plans **Paragon Parkway** Lee's Summit, Missouri

DATE:	11-4-2020
DESIGN BY:	DJM
DRAWN BY:	CMN
PROJECT NO.:	12720
SHEET NO.	36
TOTAL SHEETS	51

NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing 10/16/2020		





STATE OF MISSOURI
CLINT LOUMASTER
NUMBER PE-2011009651
11/4/2020
REGISTERED PROFESSIONAL ENGINEER

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DATE:	11-4-2020
DESIGN BY:	DJM
DRAWN BY:	CMN
PROJECT NO.:	12720
SHEET NO.	37
TOTAL SHEETS	51

Clint Loumaster
Professional Engineer
License No. PE2011-009651

Street and Storm Sewer Plans
Paragon Parkway
Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing 10/16/2020		

Erosion Control Details

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DESIGN BY:	DJM
DRAWN BY:	CMN
PROJECT NO.:	12720
SHEET NO:	38
TOTAL SHEETS	51

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Street and Storm Sewer Plans

Paragon Parkway

Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
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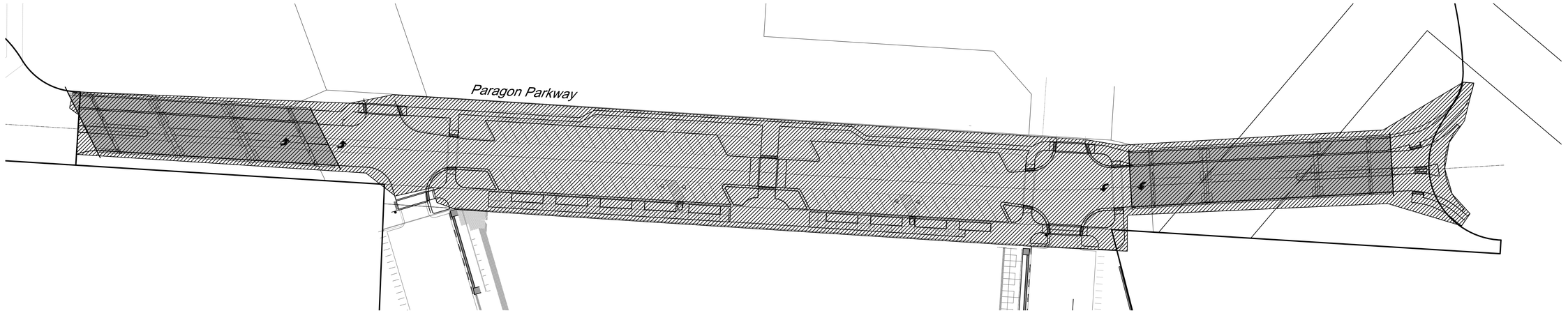
Phase 1 Work Area

TRAFFIC CONTROL NOTE:
See View High Drive and Roads 1, 3, and 4 Project Plans for traffic control plans.



50' 0' 50' 100'
SCALE : 1 INCH = 50 FEET

Construction Sequencing Plan

DATE:	11-4-2020
DESIGN BY:	CEL
DRAWN BY:	DRV/DGL
PROJECT NO.:	12720
SHEET NO.	39
TOTAL SHEETS	51

STATE OF MISSOURI — CLINT LOUMASTER — NUMBER PE-2011009651 — 11/4/2020 — REGISTERED PROFESSIONAL ENGINEER

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Street and Storm Sewer Plans
Paragon Parkway
Lee's Summit, Missouri

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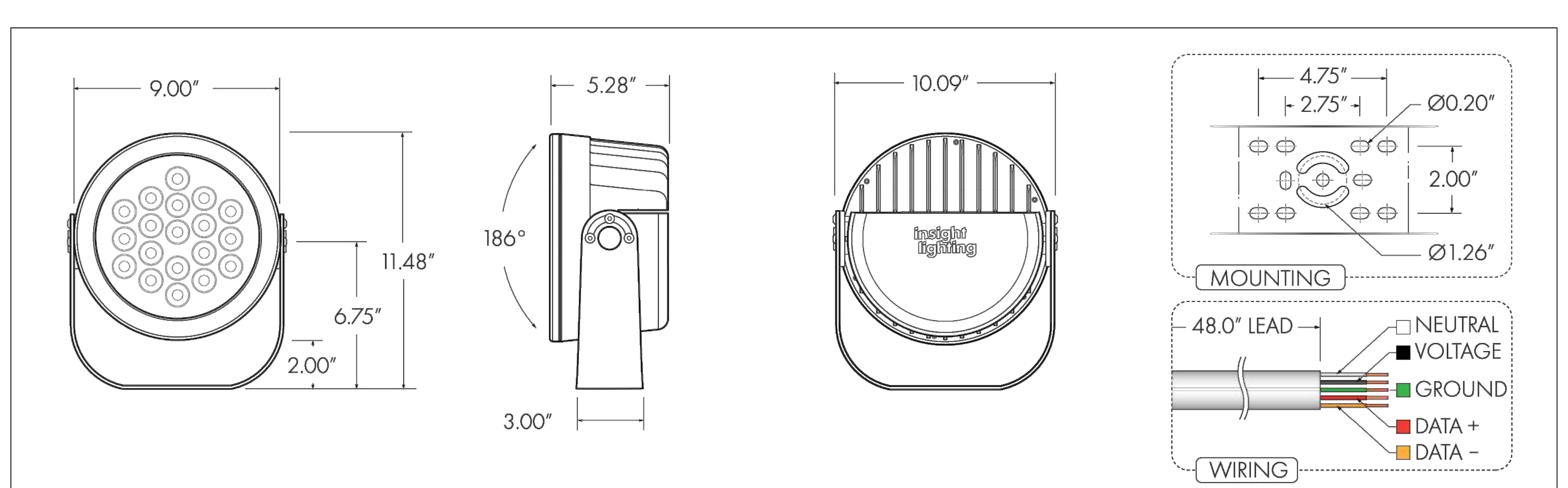
STREET LIGHTING NOTES

1. All lights not mounted to bridges shall use concrete foundations. Screw-in anchor base foundations shall not be used within the hardscaped areas along Paragon Parkway.

LEGEND

- Pole Mount Luminaire (25' Mt. Ht., 4' Arm Length, GLNA-AF-03-LED-E1-SL3-HSS; Ped 9'8" Mt. Ht., GLNA-AF-01-LED-E1-SL2; Idyline Curve Pole c5-03)
- Pole Mount Luminaire (25' Mt. Ht., 4' Arm Length, GLNA-AF-03-LED-E1-SL4-HSS; Ped 9'8" Mt. Ht., GLNA-AF-01-LED-E1-SL2; Idyline Curve Pole c5-03)
- Pole Mount Luminaire (23'6" Mt. Ht., 3'2" Arm Length, GLNA-AF-03-LED-E1-SL3-HSS; Idyline Curve Pole c5-02)
- Bridge Mounted Luminaire (Insight Prospot PS9-MO-40K-20-TR-UNV-DIM-TN-VS-TA2-ACJM-10)
- Secondary Service Point — Ex. Secondary Service Point
- Street Light Control Center — Ex. Street Light Control Center
- Junction Box — Ex. Junction Box
- HDPE Conduit — Ex. HDPE Conduit
- Bridge Attached Conduit (See Bridge Plans for Details)

Insight Prospot 9

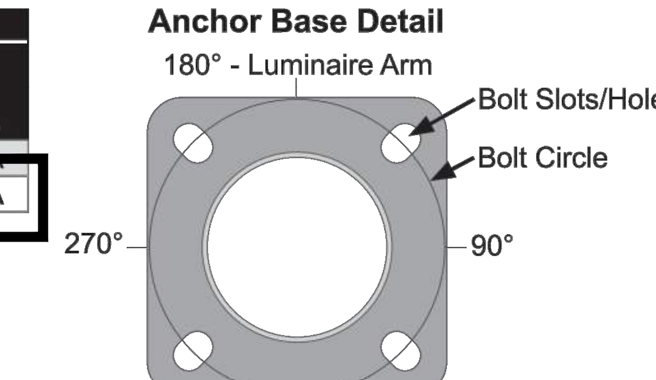


Idyline Curve Base Plate

ANCHORAGE DATA

NUMBER OF SECTIONS	POLE BASE OD (IN)	ANCHOR BASE: BOLT CIRCLE DIA (IN)	ANCHOR BASE: BOLT CIRCLE ± (IN)	ANCHOR BASE: SQUARE (IN)	ANCHOR BASE: THK (IN)	ANCHOR BASE: DIA X LENGTH X HOOK (IN)	ANCHOR BOLTS: PROJECTION (IN)	ANCHOR BOLTS: ± (IN)
2	5.50	8.50	N/A	8.50	0.750	0.75 x 17.00 x 3.00	3.50	N/A
3	7.00	10.50	N/A	10.00	1.000	1.00 x 36.00 x 4.00	4.25	N/A

Anchor Base Detail



50' 0' 50' 100'

Street Lighting Plan

STATE OF MISSOURI
CLINT LOUMASTER
NUMBER PE-2011009651
11/4/2020
REGISTERED PROFESSIONAL ENGINEER

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DATE:	11-4-2020
DESIGN BY:	DJM
DRAWN BY:	CMN
PROJECT NO.:	12720
SHEET NO.	40
TOTAL SHEETS	51

Clint Loumaster
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Street and Storm Sewer Plans
Paragon Parkway
Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
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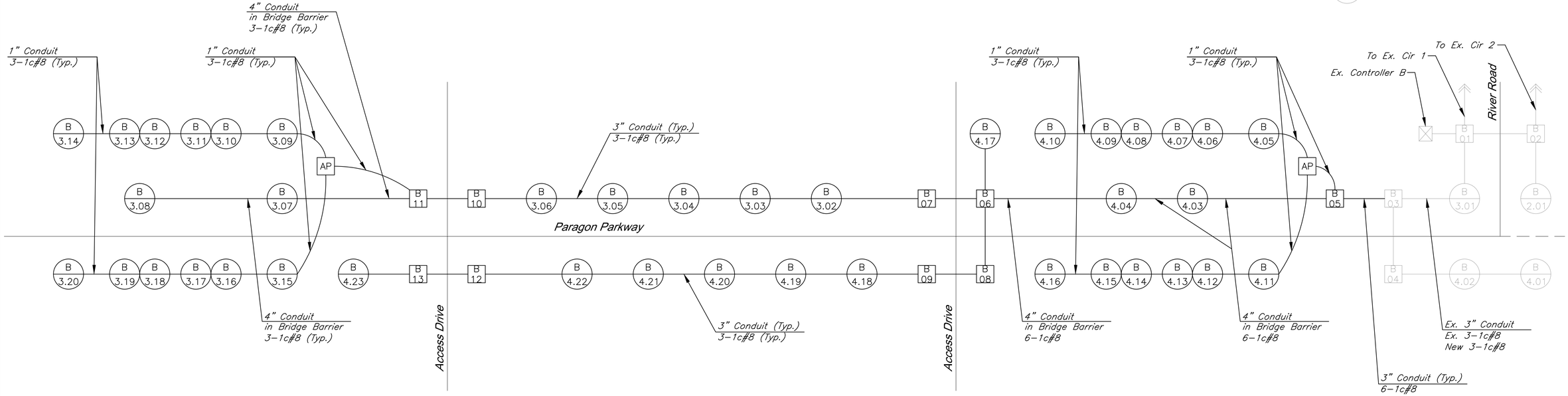
LEGEND

- A / 2.01 — Controller; Circuit/Luminaire Number
- 01 — Junction Box
- Secondary Service Point
- Control Center
- 01 — Existing Junction Box
- Existing Secondary Service Point
- Existing Control Center
- A / 2.01 — Existing Luminaire



Street Lighting Wiring Diagram

STATE OF MISSOURI
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11/4/2020
REGISTERED PROFESSIONAL ENGINEER

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DATE:	11-4-2020
DESIGN BY:	DJM
DRAWN BY:	CMN
PROJECT NO.:	12720
SHEET NO.:	41
TOTAL SHEETS	51

Clint Loumaster
Professional Engineer
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Street and Storm Sewer Plans
Paragon Parkway
Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing 10/16/2020		

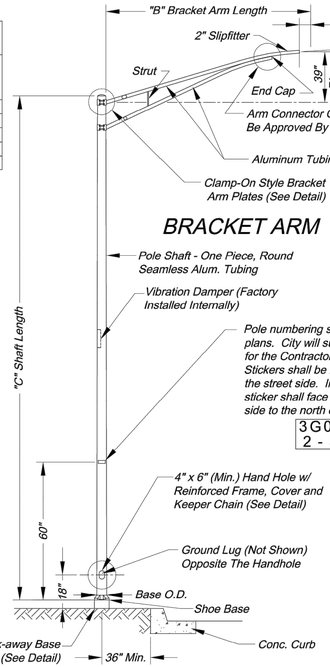
STREET LIGHT POLE, BRACKET ARM, AND BREAK-AWAY BASE

POLE TYPE	MOUNTING HEIGHT (A)	BRACKET ARMS		POLE SHAFT				SHOE BASE	ANCHOR BOLTS		
		LENGTH (B)		BASE O.D.	TOP O.D.	MIN. WALL THICKNESS	SHAFT LENGTH (C)	BOLT CIRCLE (BC)	DIAMETER	LENGTH	HOOK
		ARM 1	ARM 2								
P14	14'	-	-	6"	3"	0.156"	14'-0"	9.5"	0.75" 10NC	25"	3"
P30S	30'	6' or 10'	-	8"	6"	0.188"	26'-6" ±2"	11.0"	1.00" 8NC	36"	4"
P30D	30'	6' or 10'	6' or 10'	8"	6"	0.219"	26'-6" ±2"	11.0"	1.00" 8NC	36"	4"
P40S	40'	6', 10' or 15'	-	8"	6"	0.219"	36'-6" ±2"	11.5"	1.00" 8NC	36"	4"
P40D	40'	6', 10' or 15'	6', 10' or 15'	10"	6"	0.219"	36'-6" ±2"	14.5"	1.00" 8NC	48"	4"

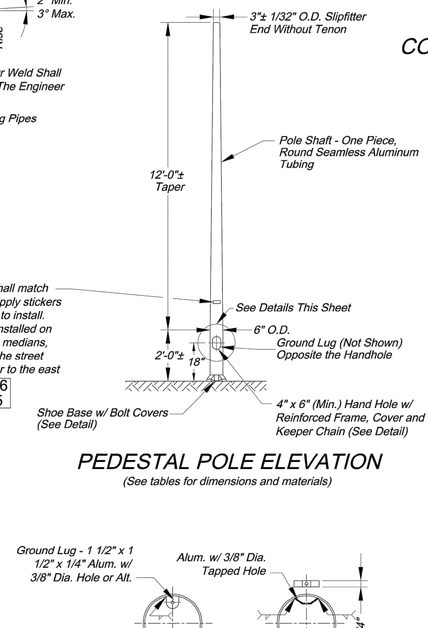
NOTES:
1. All poles, arms, and miscellaneous equipment shall conform to these details and as specified by the latest city standard specifications.
2. Pole shaft shall have a satin ground finish.
3. All hardware (bolts, nuts, washers but not including anchor bolts) not otherwise specifically designated in the specifications or details shall be 300-series stainless steel conforming to ASTM A193 or A194.
4. Anchor bolts shall be used with concrete bases. Anchor bolts shall be steel with 50,000 PSI minimum yield; top 10" min. galvanized; including 8 nuts and 8 flat washers galvanized to ASTM A153 standards. Galvanized hex head bolts (see pole foundation sheet) shall be used with screw-in anchor bases. 4 bolts, 4 nuts and 8 flat washers to provided with each anchor.
5. All welding is to be done with 4043 weld wire. All arms and shafts are to be heat-treated to T6 temper after welding.
6. Anchor bolts shall project above the concrete base as per manufacturer's recommended practices, 2 ½ " to 3".
7. The aluminum street light pole assembly, including anchorage and luminaire, shall comply with the latest city standard specifications and the American Association of State Highway and Transportation Officials (AASHTO) load wind loading.
8. All poles and arms shall be clearly identified by the manufacturer's name, abbreviation, or symbol engraved on the shaft, shoe base, hand hole, or other means such as to be readily visible after installation.

MATERIAL DATA

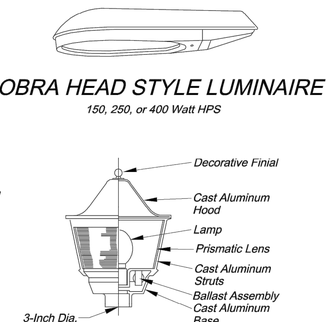
COMPONENT	ALUMINUM ALLOY DESIGNATION	SPECIFICATION
Shoe Base	356-T6, Cast	ASTM B26 or B108
Breakaway Base	356-T6, Cast	ASTM B108
Bolt Covers	356 or 360, Cast	ASTM B26 or B108
Pole Shaft	6063-T6, Extruded	ASTM B221 or B241
Ground Lug	6061-T5 or 6063-T6, Plate	ASTM B221
Reinforced Handhole Frame	356-T6 or 6061-T6	ASTM B26, B108 or B221
Handhole Cover	6063-T6	ASTM B209, B221 or B241
Bracket Arm & Tubing Pipes	6063-T6	ASTM B221, B241 or B249
Bracket Arm Mounting Plates	6061-T6 or 6063-T6 Extruded	ASTM B221
Bracket Arm Strut & Arm Connector	6061-T6 or 6063-T6 Extruded	ASTM B221, B241 or B249
Pole Cap	356, Cast	ASTM B26 or B108
Anchor Bolts	N/A	Galvanized per ASTM A153



BRACKET ARM

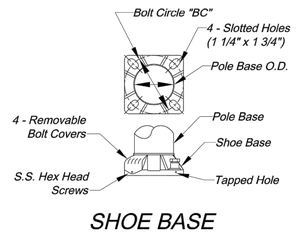


PEDESTAL POLE ELEVATION
(See tables for dimensions and materials)

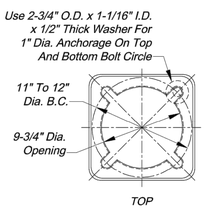


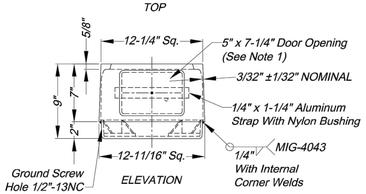
COBRA HEAD STYLE LUMINAIRE
150, 250, or 400 Watt HPS

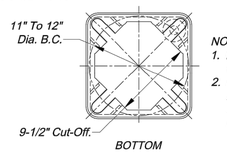
POST TOP LUMINAIRE
150 Watt HPS



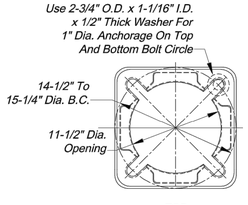
SHOE BASE

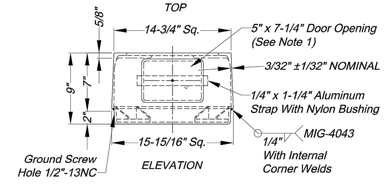


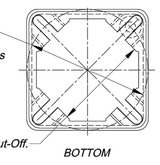




11" BREAK-AWAY BASE

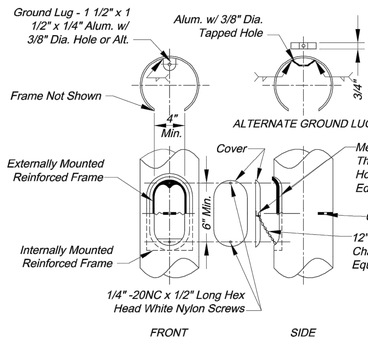




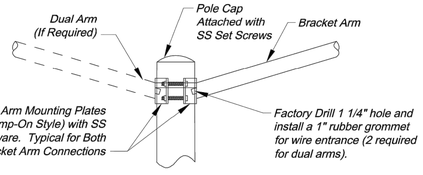


NOTES:
1. Door shall be on the same side of the pole as the hand hole.
2. Base Conforms to Breakaway Criteria Of AASHTO Standard Specifications For Structural Supports For Highway Signs, Luminaires And Traffic Signals (1994).

15" BREAK-AWAY BASE

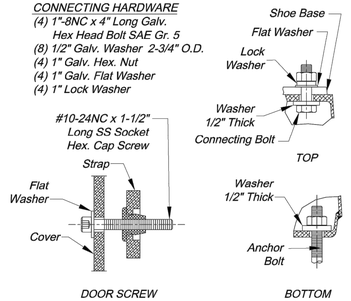


HAND HOLE



BRACKET ARM MOUNTING

CONNECTING HARDWARE
(4) 1"-8NC x 4" Long Galv. Hex Head Bolt SAE Gr. 5
(8) 1/2" Galv. Washer 2-3/4" O.D.
(4) 1" Galv. Hex. Nut
(4) 1" Galv. Flat Washer
(4) 1" Lock Washer



BREAK-AWAY BASE ANCHORAGE

CITY OF LEE'S SUMMIT
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
220 SE GREEN STREET
LEE'S SUMMIT, MISSOURI 64063
PHONE: (816) 969-1800 FAX: (816) 969-1809

Project:

POLE AND LUMINAIRE DETAILS

Sheet Name: STANDARD DRAWING SL-1

Drawn By: JH
Checked By: JW
Date: 08/21/2009

1 OF 5
1

STATE OF MISSOURI
CLINT LOUMASTER
NUMBER PE-2011009651
11/4/2020
REGISTERED PROFESSIONAL ENGINEER

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DATE:	11-4-2020
DESIGN BY:	DJM
DRAWN BY:	CMN
PROJECT NO.:	12720
SHEET NO.	42
TOTAL SHEETS	51

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License No. PE2011-009651

Street and Storm Sewer Plans
Paragon Parkway
Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
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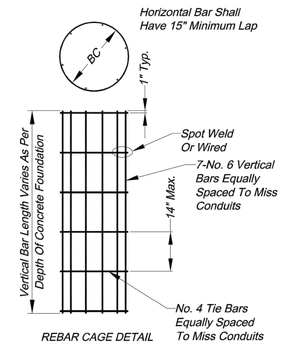
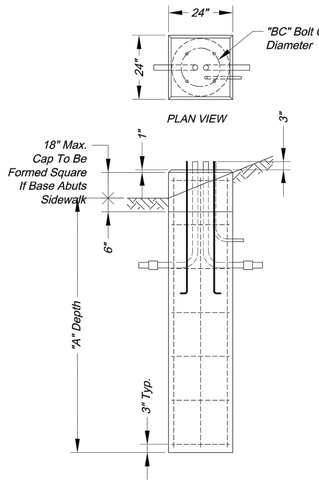
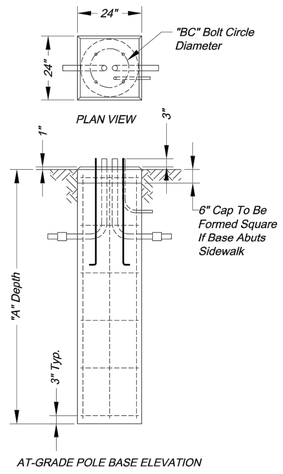
POLE TYPE	BRACKET ARM	DEPTH (A)	BOLT CIRCLE (BC)
P14	---	48"	9.5"
P30S or P30D	Single or Dual	72"	11.0"
P40S	Single	94"	11.5"
P40D	Dual	94"	14.5"



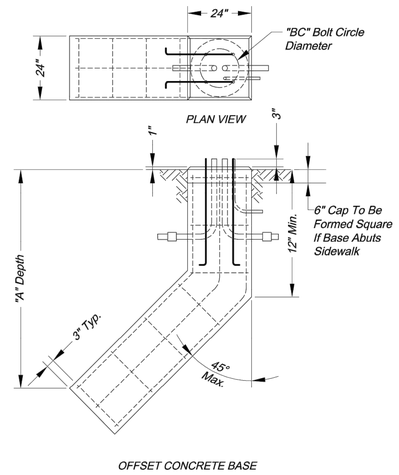
REBAR CAGE DETAIL



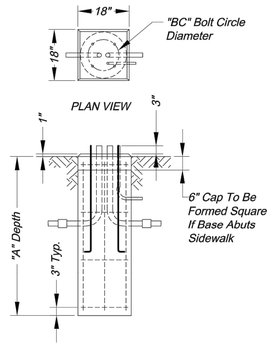
RAISED POLE BASE ELEVATION



AT-GRADE POLE BASE ELEVATION



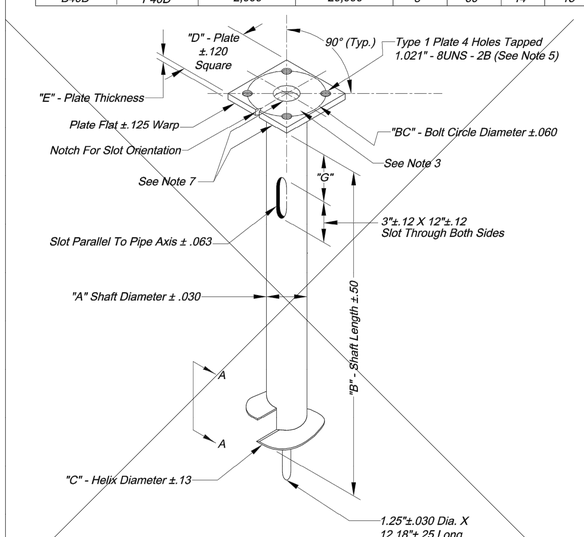
OFFSET CONCRETE BASE



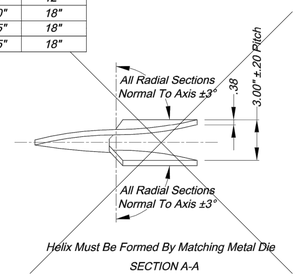
PEDESTAL POLE BASE

CONCRETE BASE DETAILS

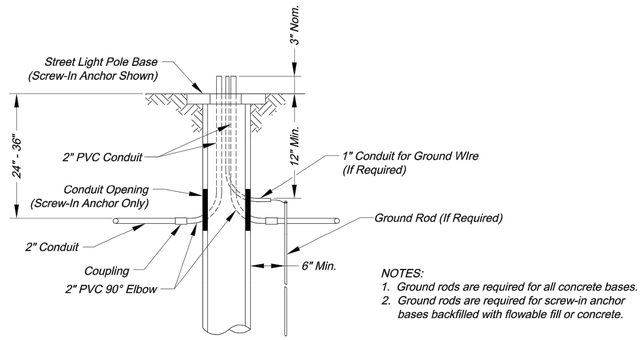
BASE TYPE	POLE TYPE	MINIMUM TORQUE RATING (lbs. ft.)	MAXMUM TORQUE RATING (lbs. ft.)	SHAFT DIA. (A)	SHAFT LENGTH (B)	HELIX DIA. (C)	PLATE SIZE (D)	PLATE THICKNESS (E)	BOLT CIRCLE (BC)	SLOT LOCATION (G)
B14	P14	2,000	15,000	6"	48"	12"	10"	0.75"	9.5"	12"
B30	P30S & P30D	2,000	15,000	6"	60"	12"	12"	1.0"	11.0"	18"
B40S	P40S	2,000	20,000	8"	60"	14"	12"	1.0"	11.5"	18"
B40D	P40D	2,000	20,000	8"	60"	14"	15"	1.25"	14.5"	18"



SCREW-IN ANCHOR BASE DETAILS



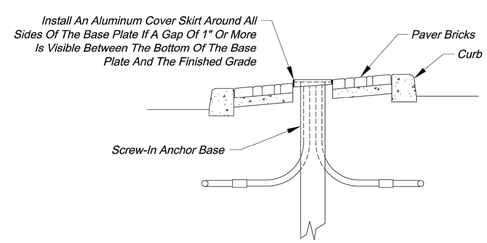
Helix Must Be Formed By Matching Metal Die
SECTION A-A



NOTES:
1. Ground rods are required for all concrete bases.
2. Ground rods are required for screw-in anchor bases backfilled with flowable fill or concrete.

CONDUIT ENTRANCE AND GROUNDING

NOTES:
1. Finish: Hot dip galvanize per ASTM-A153 (latest revision).
2. Baseplate to be perpendicular to shaft axis (±1°) and hole and concentric (±.188 I.D. Fim) to shaft axis.
3. All bases shall be identified by the manufacturer's initials and the anchor type (1 or 2) permanently stamped into the top plate with 1/2" letters., the Julian date of manufacture shall be permanently stamped in 1/4" numerals.
4. Pilot point and shaft axes to be concentric (±.125 Fim) and in line (±2°).
5. Tap 1" holes on the specified bolt circle perpendicular to the baseplate. Clean and chase the threads after hot-dip galvanizing so that a bolt may be installed.
6. Preheat (room temperature 70°F), tumbleblast, handgrind, and clean baseplate, helix, and core on all weld areas.
7. Flame cut irregularities permissible:
   (1) Valleys not to exceed 3/32 in. below nominal surface level.
   (2) Peaks or positive irregularities not to exceed 1/32 in. above nominal surface level or intersections of nominal surfaces.
8. Manufacturer to have in effect industry recognized written quality control for all materials and manufacturing processes.
9. All material is to be new, unused and mill traceable meeting the following specifications:
   - Baseplate: ASTM A36-(latest revision) hot rolled steel plate (conform to AASHTO technical bul. #270).
   - Shaft: Steel pipe piles, seemless or straight welded, grade 2 per ASTM A252. Alternate material: pipe type E or S, grade B per ASTM A53.
   - Helix: ASTM A635-(latest revision) hot rolled steel plate
   - Pilot Point: ASTM A575-(latest revision) hot rolled steel
   - Bolt: ASTM A325 or Grade 5 SAE J429 - 1" diameter hot dip galvanized hex head bolt. Bolt shall include one each lock and flat washer.
10. The design and performance integrity of the foundation shall be verified by full-scale tests by qualified engineers independent of the manufacturer. Certified test reports shall be provided upon request.
11. Flame cut notch or projection will be on the base plate to indicate slot orientation.



COVERSKIRT REQUIREMENTS

CITY OF LEE'S SUMMIT
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
220 SE GREEN STREET
LEE'S SUMMIT, MISSOURI 64063
PHONE: (816) 969-1800 FAX: (816) 969-1809

Project:
POLE BASE DETAILS
Sheet Name: STANDARD DRAWING SL-2

Drawn By: JH
Checked By: JW
Date: 08/21/2009

2 OF 5

2

STATE OF MISSOURI
CLINT LOUMASTER
NUMBER PE-2011009651
11/4/2020
REGISTERED PROFESSIONAL ENGINEER

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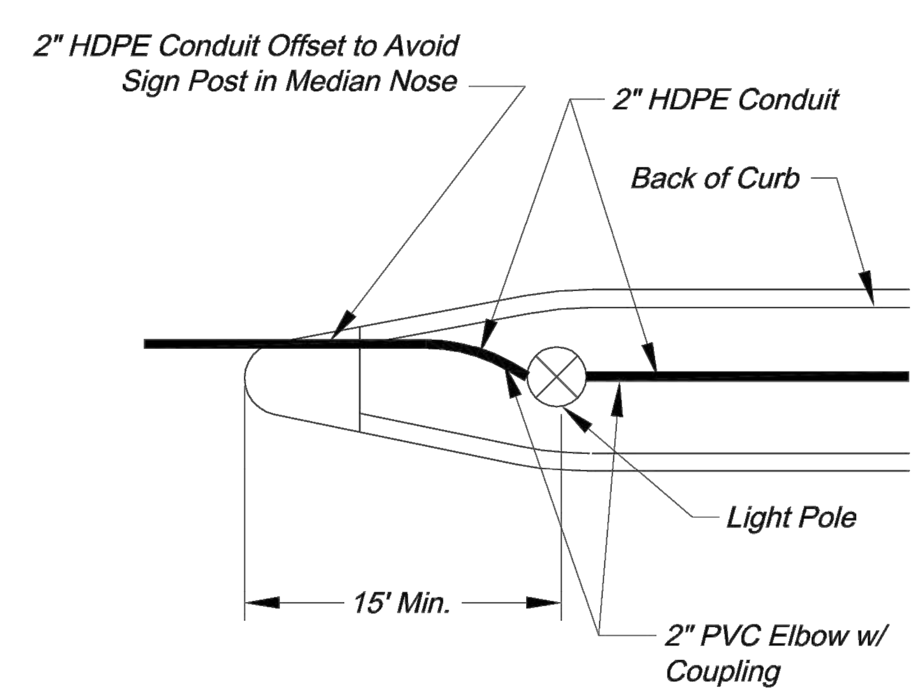
Clint Loumaster
Professional Engineer
License No. PE2011-009651

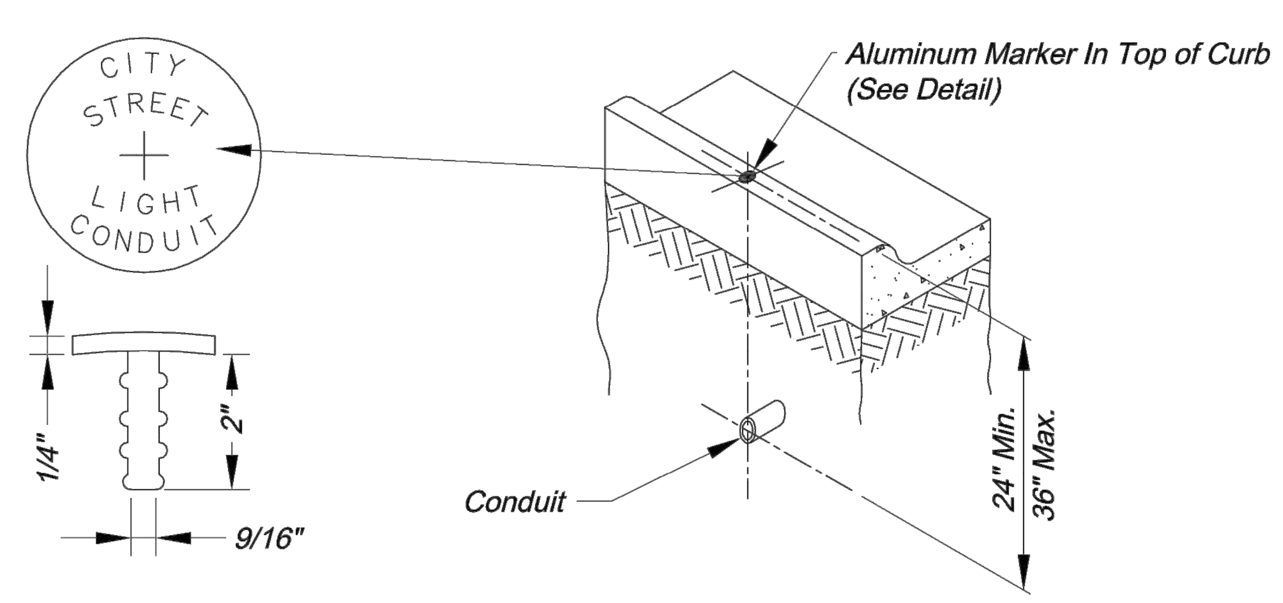
DATE:	11-4-2020
DESIGN BY:	DJM
DRAWN BY:	CMN
PROJECT NO.:	12720
SHEET NO.	TOTAL SHEETS
43	51

Street and Storm Sewer Plans
Paragon Parkway
Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing 10/16/2020		

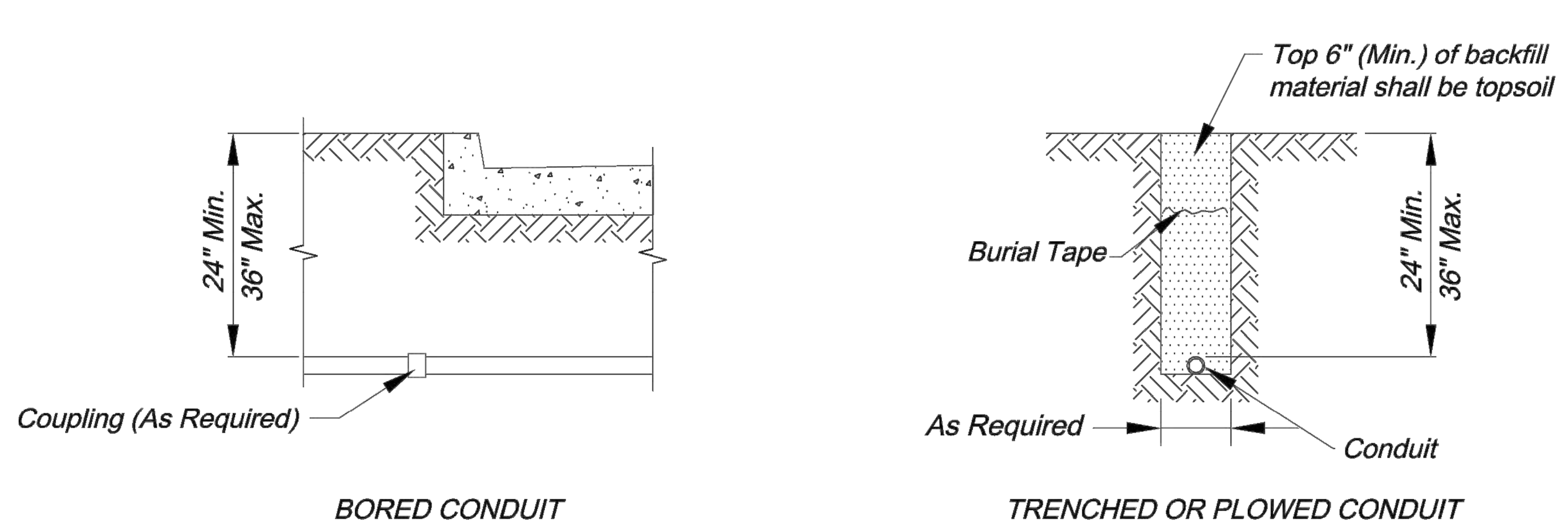


STREET LIGHT POLE IN MEDIAN



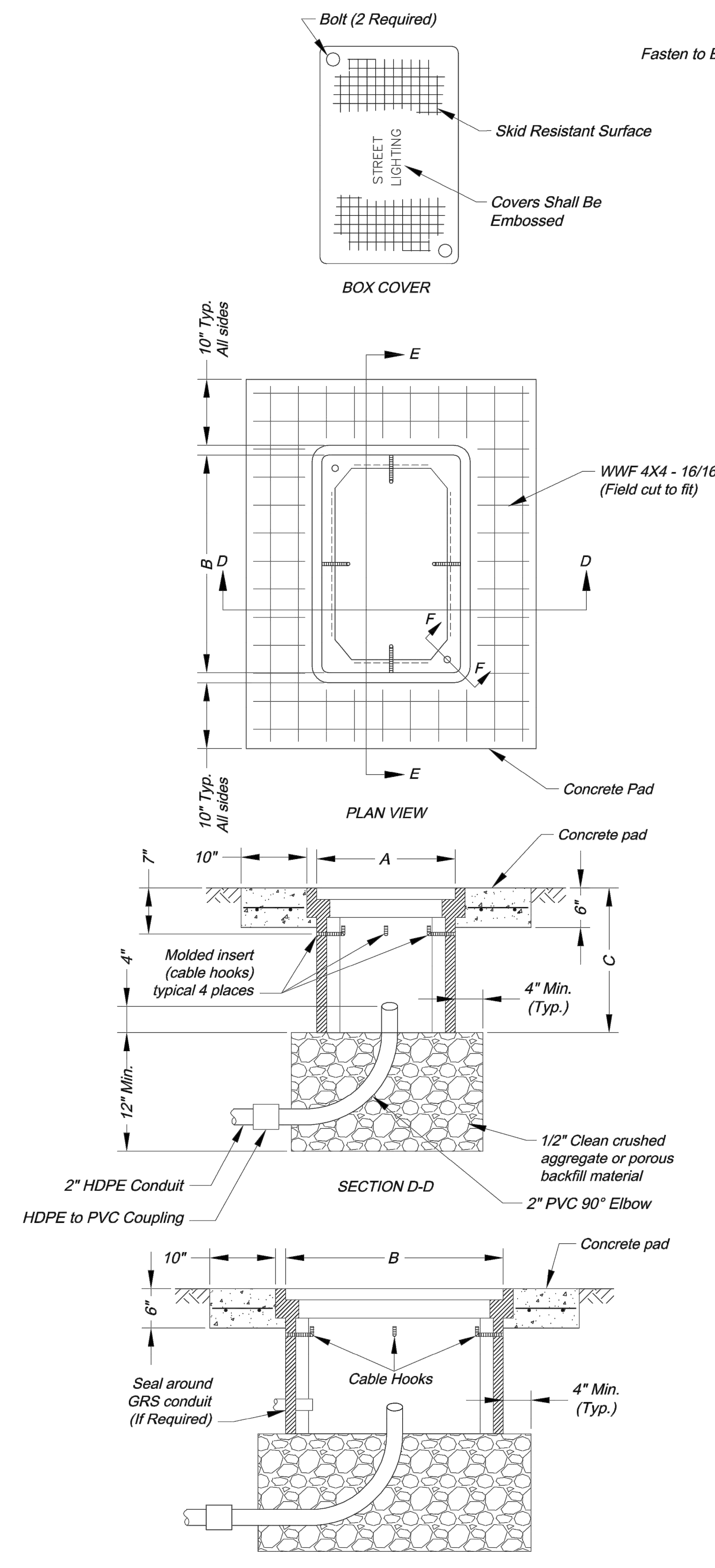
CONDUIT MARKING DETAIL

NOTES:
1. An aluminum marker shall be placed in the top of the curb directly over the conduit.
2. Markers shall be installed by drilling the curb and expoxying the marker in place. If installed in a sidewalk or curb ramp, the top of the marker shall be flush with the concrete surface.
3. No direct payment shall be made for conduit markers; they are subsidiary to the installation of conduit.

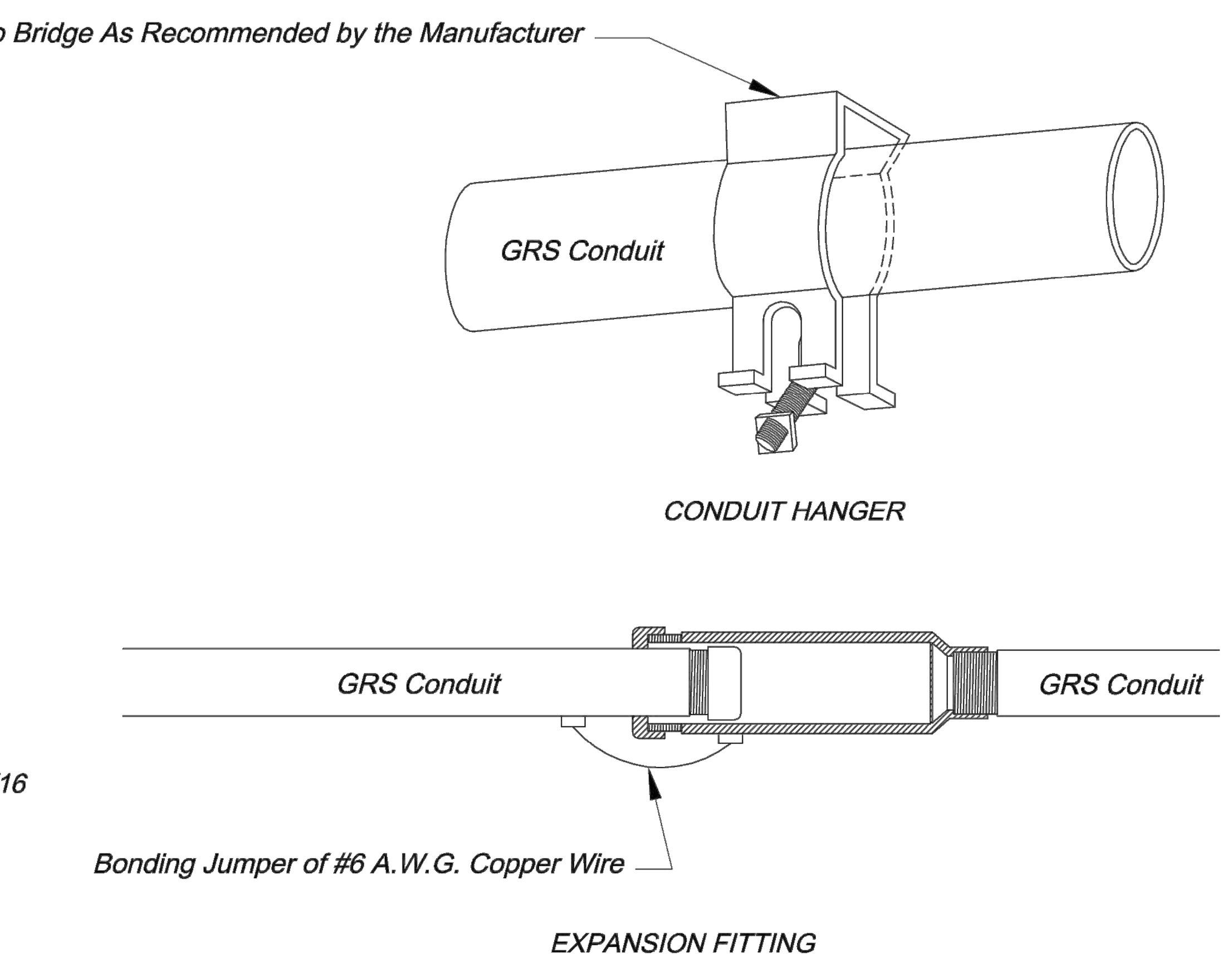


CONDUIT LOCATIONS

NOTES:
1. Backfill under paved surfaces shall be flowable fill.
2. The conduit shall not be covered unless inspected and approved by the City Engineer, so as to ensure proper depth, correct conduit material, and proper conduit end treatment.



PULL OR JUNCTION BOX DETAILS

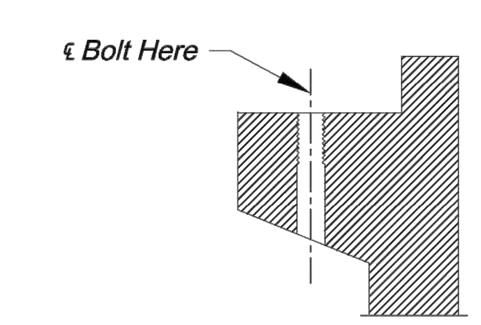


GRS CONDUIT DETAILS

NOTES:
1. All conduits installed above ground shall be GRS.
2. Conduit attached to bridges shall have expansion fittings installed at each end of the bridge and at each expansion joint on the bridge.
3. All GRS conduits shall be electrically bonded by a grounding bushing and ground wire as detailed.
4. Install the conduit and connector assembly to permit a 1/2" minimum longitudinal travel in either direction.

Number of Entering/Exiting Conduits	Box Type	Minimum Box Dimensions A	B	C
1 - 2	Type 1 Junction Box	12"	12"	12"
3 - 4	Type 2 Junction Box	12"	18"	12"
> 4	Class 1 Pull Box	17"	30"	22"

All dimensions shown are nominal



SECTION F-F

NOTES:
1. Lift opening required on all covers.
2. Preformed box walls may be either flared or vertical. The bottom of boxes shall be open to below.
3. If an extension is used with a preformed box, the lip of the extension may be interior or exterior. The extension shall be compatible and from the same manufacturer.
4. Cable hooks are to be included with Class 1 Pull Boxes only.
5. A Class 1 Pull Box shall be installed adjacent to each 4-Circuit Power Supply.

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220 SE GREEN STREET
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Project: BOX AND CONDUIT DETAILS
Sheet Name: STANDARD DRAWING SL-3

Drawn By: JH
Checked By: JW
Date: 08/21/2009

STATE OF MISSOURI
CLINT LOUMASTER
NUMBER PE-2011009651
11/4/2020
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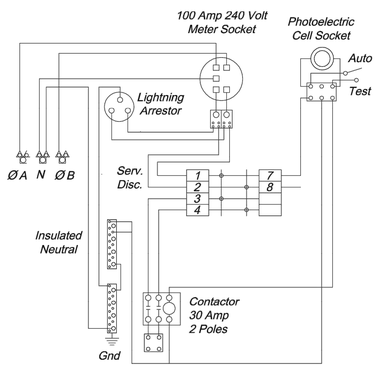
DATE:	11-4-2020
DESIGN BY:	DJM
DRAWN BY:	CMN
PROJECT NO.:	12720
SHEET NO.:	44
TOTAL SHEETS	51

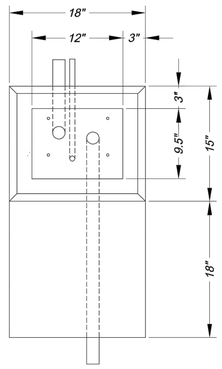
Clint Loumaster
Professional Engineer
License No. PE2011-009651

Street and Storm Sewer Plans
Paragon Parkway
Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing 10/16/2020		

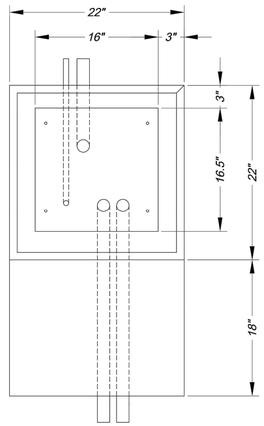


WIRING SCHEMATIC

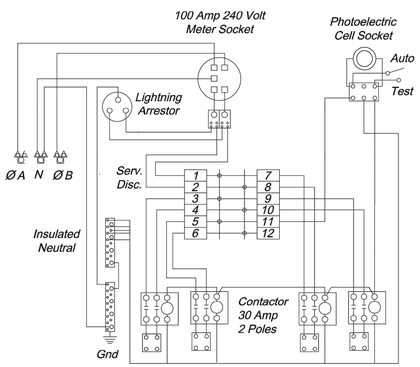


PLAN VIEW

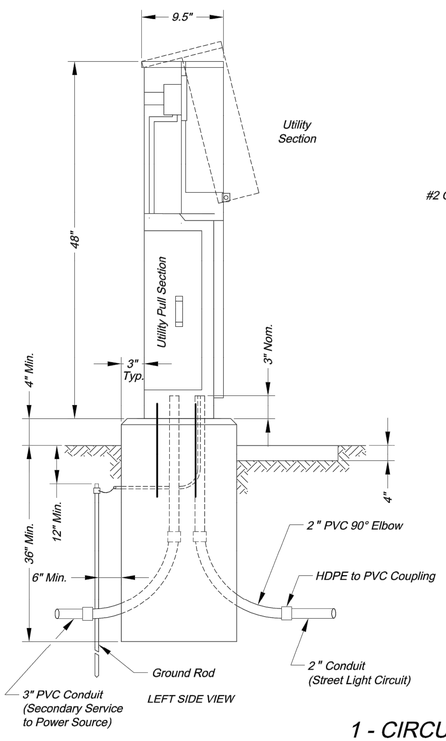
FUSED CONTACTORS ARE NOT PERMITTED



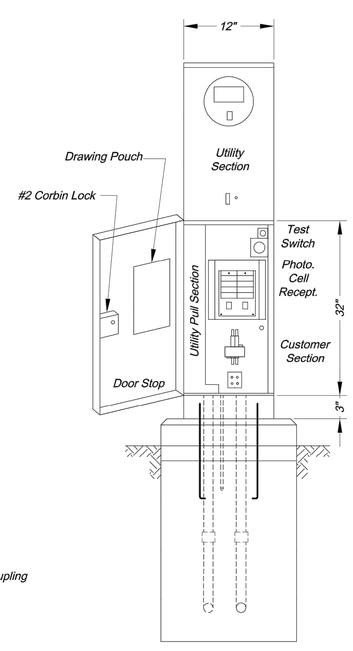
PLAN VIEW



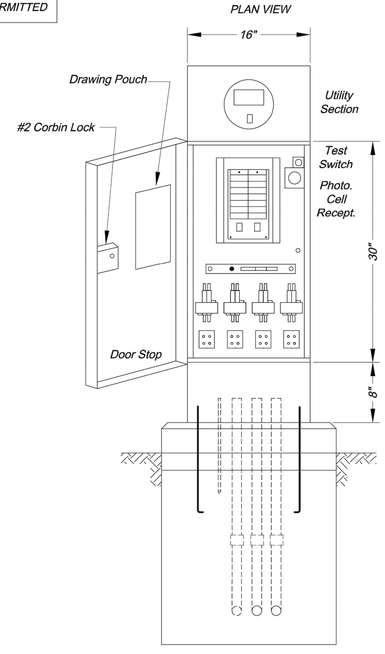
WIRING SCHEMATIC



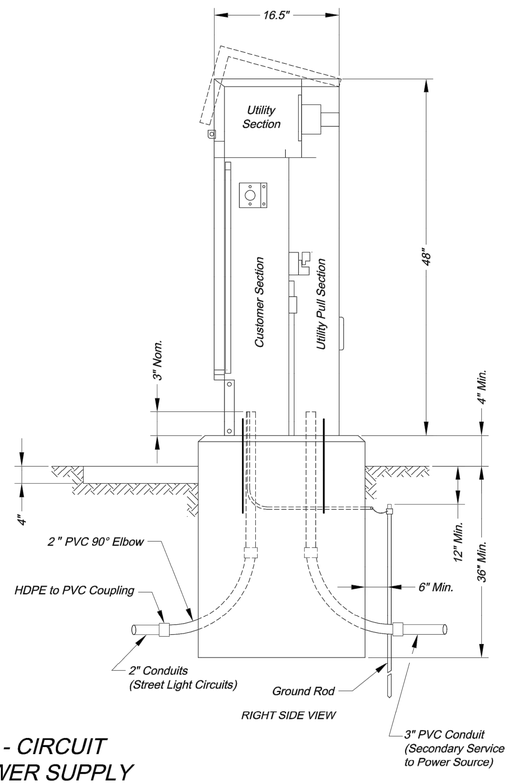
LEFT SIDE VIEW



FRONT VIEW



FRONT VIEW



RIGHT SIDE VIEW

1 - CIRCUIT POWER SUPPLY

4 - CIRCUIT POWER SUPPLY

NOTES:
1. Photoelectric cell should be oriented to the north or east.
2. Seal around joint between cabinet and base with lifetime silicone caulk.
3. All exposed edges of the base should have a 1" chamfer
4. If base is adjacent to a traffic signal controller, raised portion of base (above finished grade) should be constructed to the same height as the signal controller base.
5. The street address with the power supply number below it should be labeled on the upper portion of the cabinet facing the street. The City will supply stickers for the Contractor to install.

CITY OF LEE'S SUMMIT
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220 SE GREEN STREET
LEE'S SUMMIT, MISSOURI 64063
PHONE: (816) 969-1800 FAX: (816) 969-1809

Project:

POWER SUPPLY DETAILS

Street Name: STANDARD DRAWING SL-4

Drawn By: JH
Checked By: JW
Date: 08/21/2009

4 OF 5

4

STATE OF MISSOURI
CLINT LOUMASTER
NUMBER PE-2011009651
11/4/2020
REGISTERED PROFESSIONAL ENGINEER

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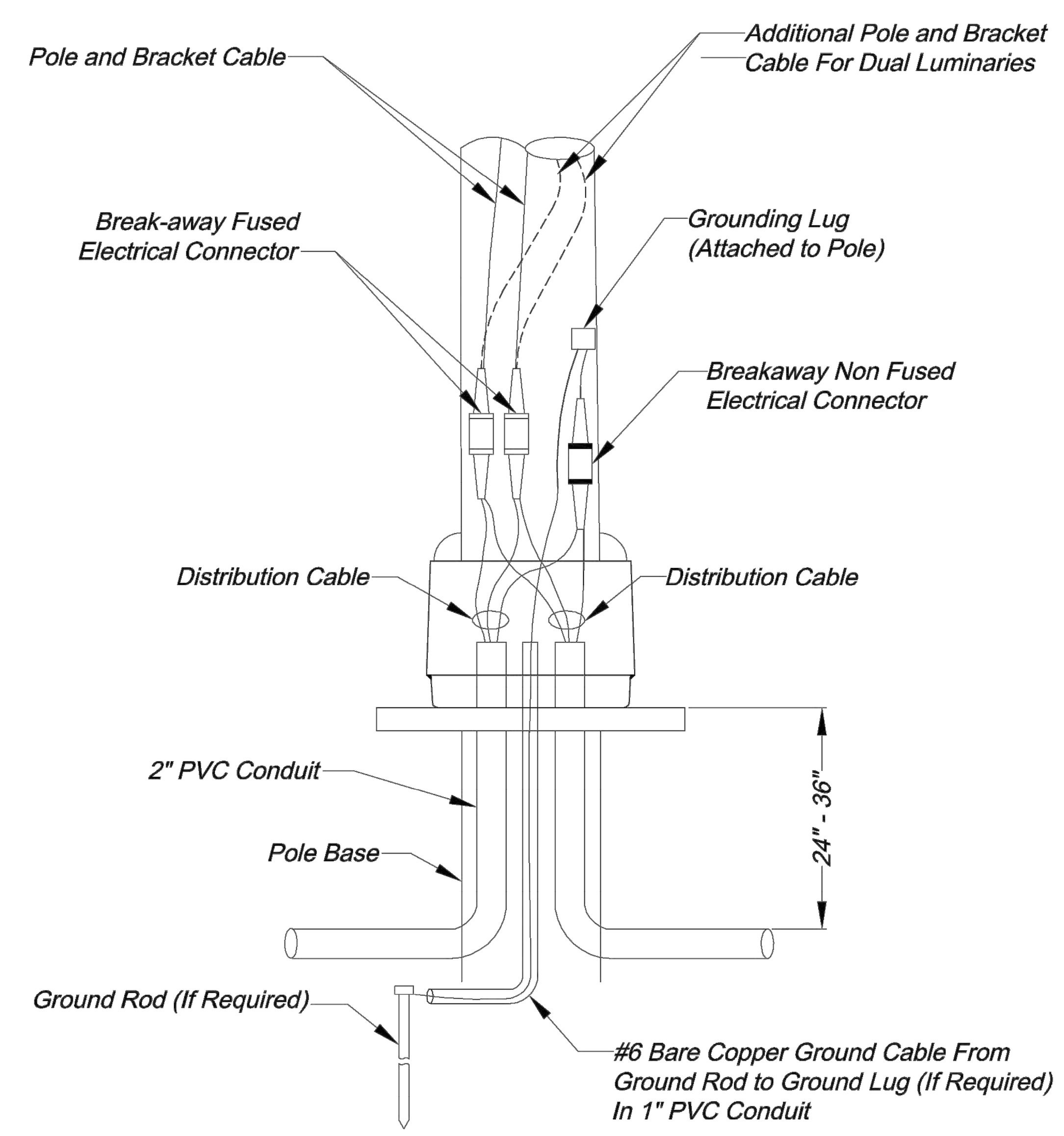
Clint Loumaster
Professional Engineer
License No. PE2011-009651

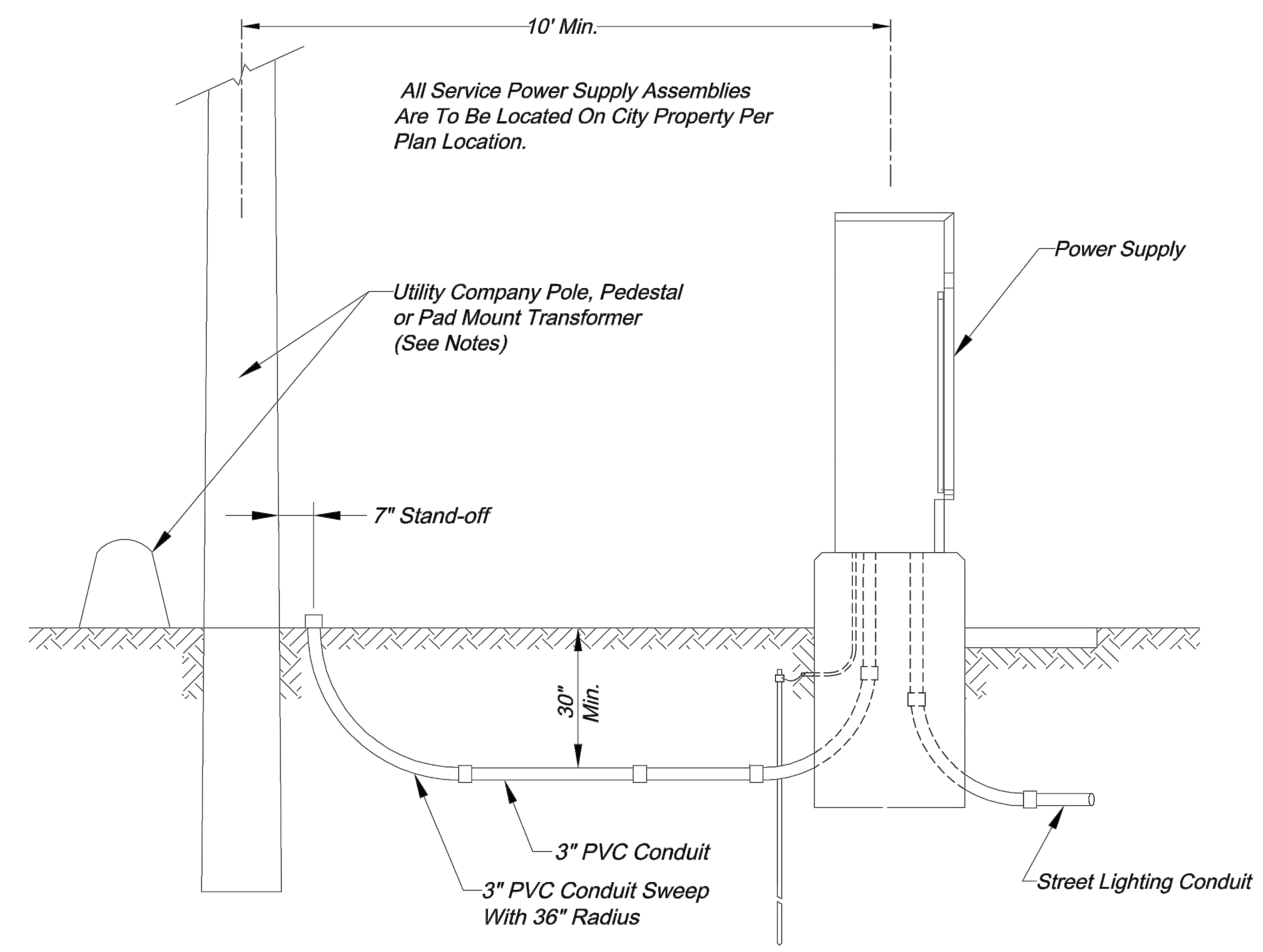
DATE:	11-4-2020
DESIGN BY:	DJM
DRAWN BY:	CMN
PROJECT NO.:	12720
SHEET NO.	TOTAL SHEETS
45	51

Street and Storm Sewer Plans
Paragon Parkway
Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing 10/16/2020		

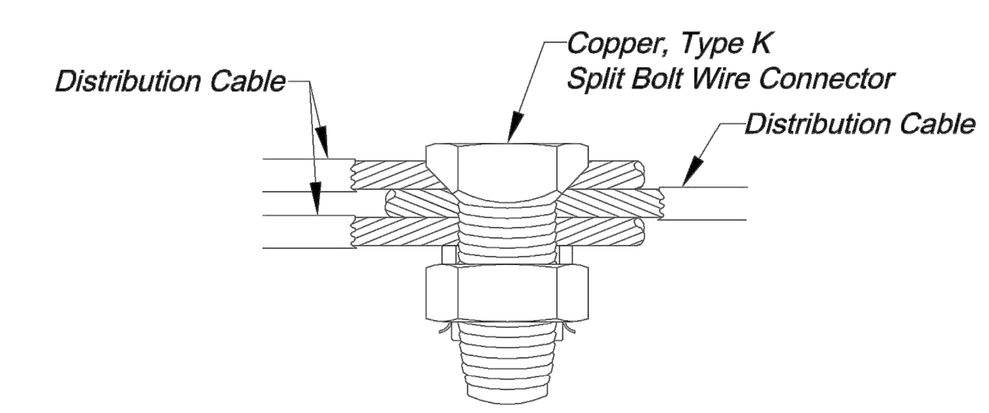


POLE WIRING DETAILS



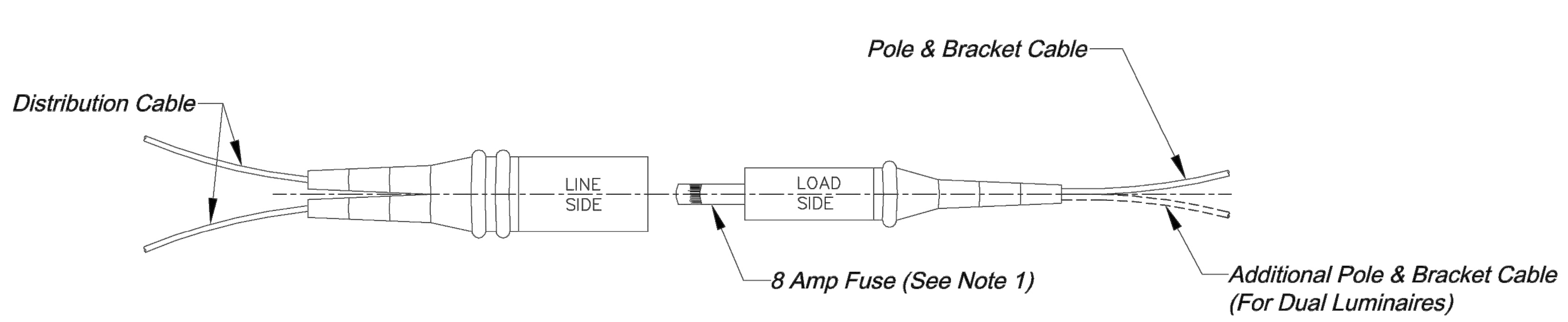
SECONDARY SERVICE CONNECTION DETAILS

NOTES:
1. Contractor shall install a conduit stub 24" to 6" above ground at utility poles. Conduit shall be stubbed to the side of the pole that will allow a direct run up the pole to the transformer without crossing other utility lines or cables. The end of the conduit shall be capped.
2. Contractor shall install conduit in a trench to within 24" of pedestals or pad mount transformers and leave a 36" x 36" x 36" access hole in the ground. Contractor shall keep open trench covered and promptly backfill access hole when service is completed.

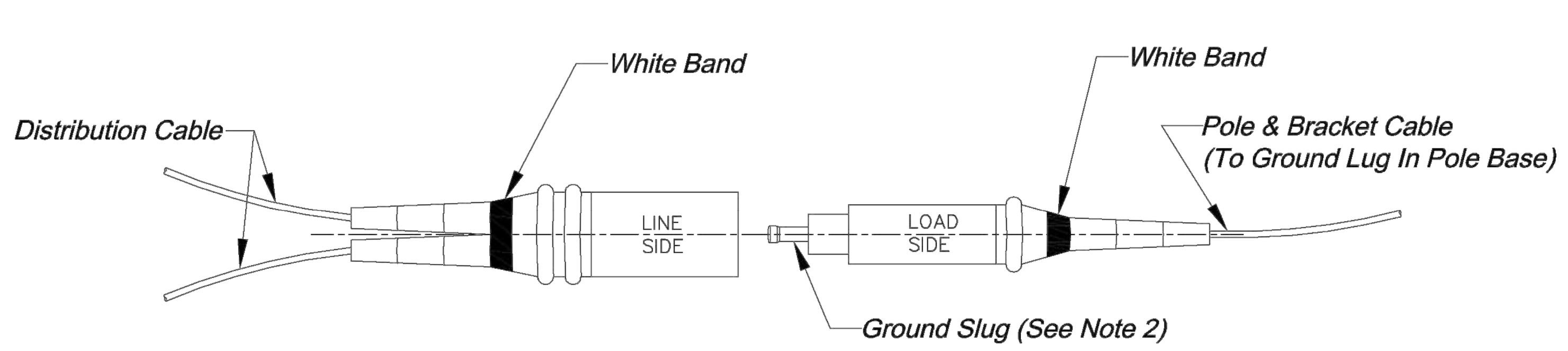


SPLICE KIT DETAILS

NOTES:
1. To be used only in junction or pull boxes where circuits branch or "tee".
2. All splices shall be protected with a resin splice kit (not shown) installed in accordance with the manufacturer's recommendations.

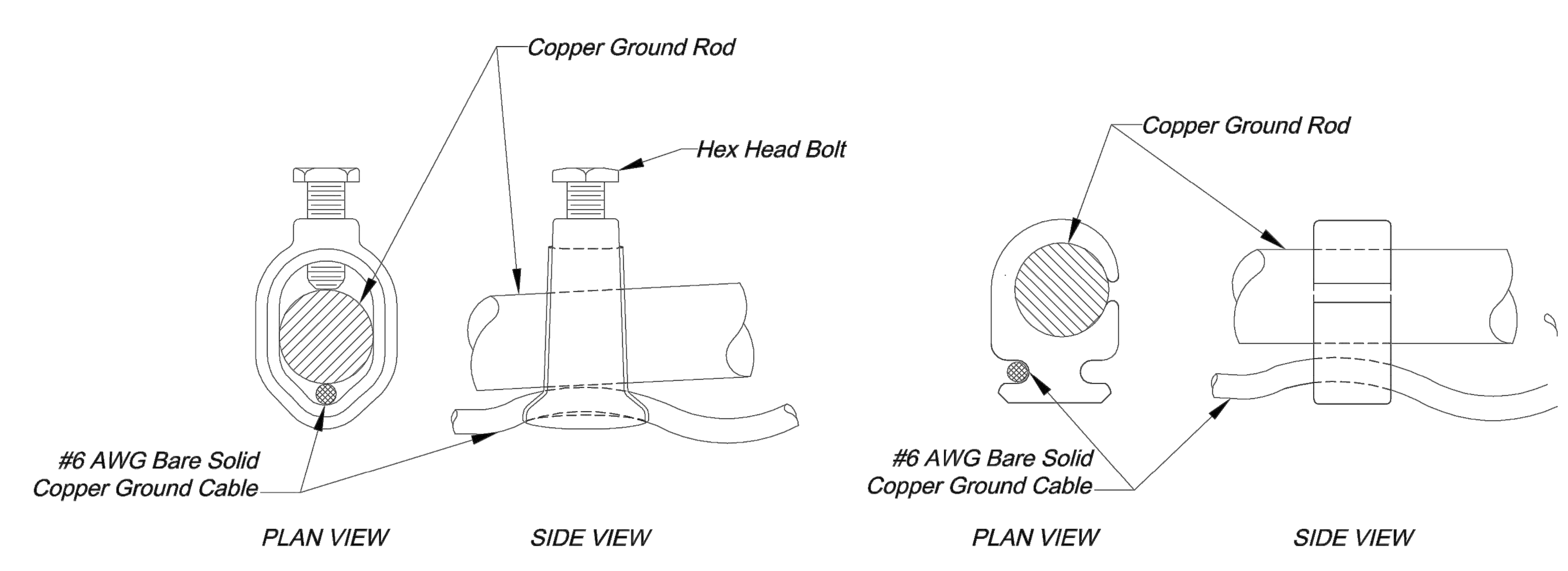


BREAK-AWAY FUSED ELECTRICAL CONNECTORS



BREAK-AWAY NON FUSED ELECTRICAL CONNECTOR

NOTES:
1. Fuse remains in "Load Side" after break-away.
2. Ground "Slug" remains in "Load Side" after break-way.
3. Connectors shall have set screw type terminals to attach cables.



GROUND ROD CONNECTION DETAILS

CITY OF LEE'S SUMMIT
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220 SE GREEN STREET
LEE'S SUMMIT, MISSOURI 64063
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Project:

Sheet Name: ELECTRICAL DETAILS
STANDARD DRAWING SL-5

Drawn By: JH
Checked By: JW
Date: 08/21/2009

DATE: 11-4-2020
DESIGN BY: CEL
DRAWN BY: DRV/DGL
PROJECT NO.: 12720
SHEET NO. 46 TOTAL SHEETS 51

STATE OF MISSOURI
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Street and Storm Sewer Plans

Paragon Parkway

Lee's Summit, Missouri

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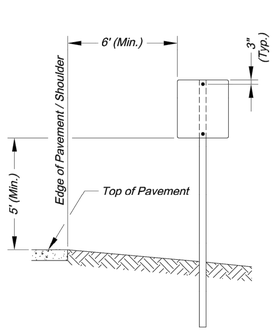
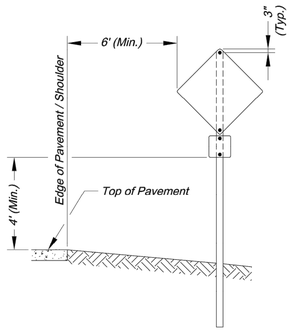
GENERAL NOTES:

All pavement marking within or under the jurisdiction of the City of Lee's Summit shall be preformed thermoplastic for pavement marking symbols, including stop lines, yield lines, diagonal lines, lane use arrows, and crosswalk lines, or high-build paint for longitudinal lines.

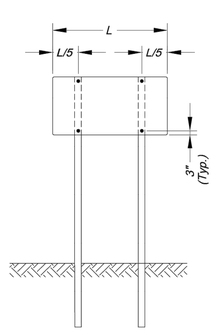
Pavement Marking and Signing Plan



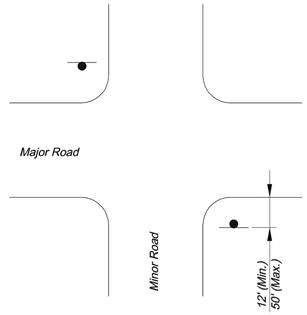
SIGN INSTALLATION FOR NON-CURBED STREET



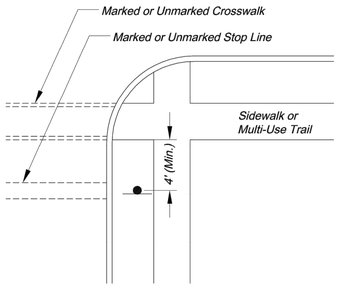
SIGN INSTALLATION WITH AUXILARY SIGN FOR NON-CURBED STREET



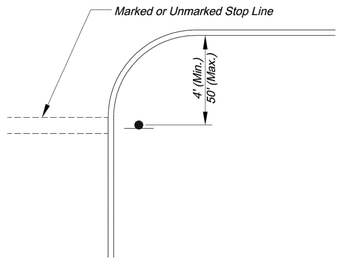
SIGN INSTALLATION WITH TWO SIGN POSTS



NON-CURBED INTERSECTION INSTALLATION

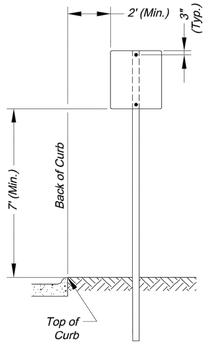


INTERSECTION WITH SIDEWALK / MULTI-USE TRAIL INSTALLATION

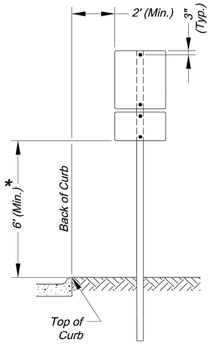


CURBED INTERSECTION INSTALLATION

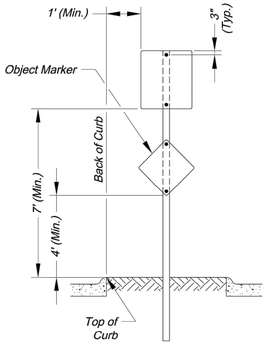
CONTROL SIGN LOCATION



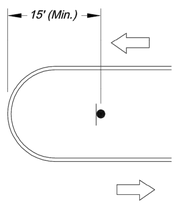
SIGN INSTALLATION FOR CURBED STREET



SIGN INSTALLATION WITH AUXILARY SIGN FOR CURBED STREET



SIGN INSTALLATION FOR RAISED MEDIANS



TYPICAL MEDIAN SIGN LOCATION

SIGN MOUNTING DETAILS

* The height to the bottom of a sign when it is located in a pedestrian walkway or extends into a walkway shall be a minimum of 80 inches above the walkway.

NOTE:
1. Generally, the sign mounting height should not be more than 1' greater than the minimum mounting height.

MEDIAN SIGN LOCATION

NOTES:
1. A 4" P.V.C. sleeve shall be installed in new concrete medians at each location where a sign is to be installed.
2. For existing concrete medians, a 4" hole shall be cored into the concrete.

STATE OF MISSOURI
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11/4/2020
REGISTERED PROFESSIONAL ENGINEER

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DATE:	11-4-2020
DESIGN BY:	DJM
DRAWN BY:	CMN
PROJECT NO.:	12720
SHEET NO.	47
TOTAL SHEETS	51

Christopher Novosel
Professional Engineer
License No. 2018024421

Street and Storm Sewer Plans
Paragon Parkway
Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing 10/16/2020		

CITY OF LEE'S SUMMIT
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
220 SE GREEN STREET
LEE'S SUMMIT, MISSOURI 64063
PHONE: (816) 969-1800 FAX: (816) 969-1809

Project:

SIGN MOUNTING DETAILS

Sheet Name: STANDARD DRAWING SN-1

Drawn By: AS
Checked By: JW
Date: 08/26/2009
Project#

1 OF 3
1

STATE OF MISSOURI
CLINT LOUMASTER
NUMBER PE-2011009651
11/4/2020
REGISTERED PROFESSIONAL ENGINEER

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DATE:	11-4-2020
DESIGN BY:	DJM
DRAWN BY:	CMN
PROJECT NO.:	12720
SHEET NO.:	48
TOTAL SHEETS	51

Christopher Novosel
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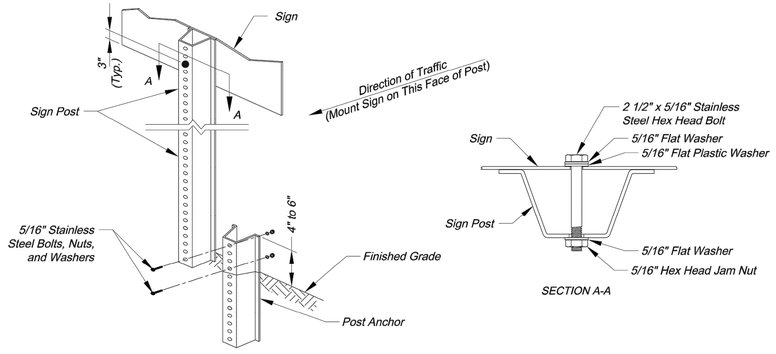
License No. 2018024421

Street and Storm Sewer Plans
Paragon Parkway
Lee's Summit, Missouri

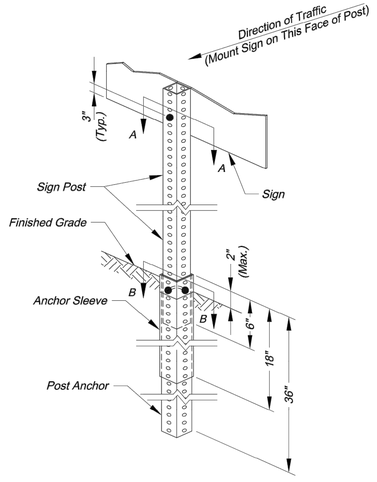
NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing 10/16/2020		



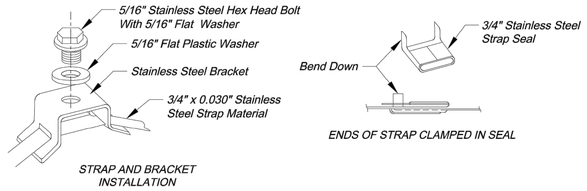
U-STEEL POST DETAILS

U-STEEL POST NOTES:
1. Splice shall be positioned entirely between finished grade line and 18" above finished grade line. Only one splice will be allowed per post.
2. U-Steel post shall be 3 lb./ft., galvanized according to ASTM A123.
3. U-Steel post can be used for installation of signs with an area of less than 2.5 square feet.
4. All posts shall be embedded a minimum of 3 feet.

PERMANENT SIGNING GENERAL NOTES:
1. All signing shall be in accordance with the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD).
2. The Contractor is responsible for avoiding any and all utilities when installing sign posts, whether the utility is indicated on the plans or not.
3. All workmanship and materials shall be subject to the inspection and approval of the Public Works Department of the City of Lee's Summit.
4. The Contractor shall stake the location of all sign posts to be installed. The City Inspector shall inspect the staking prior to installation. Minor relocation to avoid conflicts may be allowed with the approval of the City Traffic Engineer or designee.
5. Signs shown to be installed on the side of metal poles shall be mounted with stainless steel straps or wing brackets as detailed. No signs are to be installed on wood poles. See Traffic Signal Standard Drawings for the installation of signs on mast arms.
6. All post mounted signs shall be installed with breakaway anchors according to the Standard Drawings.
7. All existing signs will be used in place during construction and protected from damage unless otherwise indicated in the plans. If the Contractor damages any existing sign or posts during construction, the Contractor will be required to replace the damaged materials with new signs or posts of the same type and size at the Contractor's expense. The Contractor shall be responsible for removing and storing any signs that are to be reinstalled on the project. All equipment shall be reinstalled in good condition.
8. Existing permanent signs and posts removed by the Contractor for construction purposes which are not to be reinstalled shall be delivered to the City's Public Works Maintenance Facility (1971 SE Hamblen Road). The Contractor shall be responsible for removing and storing equipment in good condition and is fully responsible for the equipment until it is delivered.
9. All Stop, Yield, or street name signs shall be maintained in a conspicuous location for the driving public. All Stop and Yield signs removed for construction purposes can be temporarily erected in reflectorized drums (no less than 7 feet above the pavement surface) until they can be reinstalled. Any temporary Stop or Yield sign installation to be left in place overnight will require prior approval from the City Inspector.

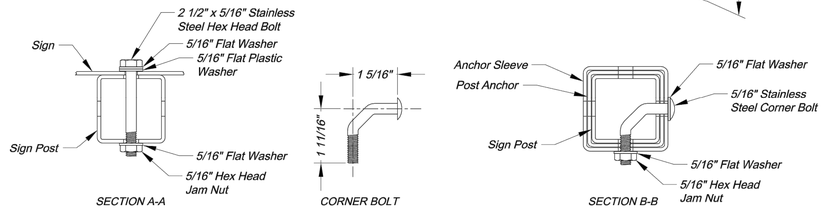


SQUARE STEEL POST INSTALLATION SEQUENCE:
1. Sign post anchor driven partially into the ground using a drive cap with a sledge or power equipment.
2. Anchor sleeve slipped over anchor and drive into the ground together with the sign post anchor.
3. Insert sign post into the post anchor and bolt in place.



STRAP TYPE SIGN SUPPORT DETAILS

METAL POLE SIGN MOUNTING NOTES:
1. Signs on metal poles shall be attached with two brackets and stainless steel bands.
2. Holes in sign for attachment to the mounting brackets shall be offset a minimum of 2 inches from the edge of the sign.
3. Holes in sign shall be located such that the sign is level.
4. All strap, bracket, and seal materials should be Type 201 stainless steel.



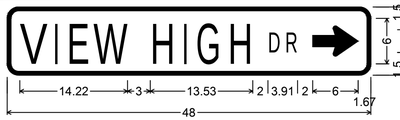
SQUARE STEEL POST DETAILS

SQUARE STEEL POST NOTES:
1. Square steel sign posts and break-away anchor shall consist of the following materials:
   - Sign Post - 14 Ga. 2" x 2" Square Steel Post
   - Post Anchor - 12 Ga. 2 ½" x 2 ¼" x 36" Square Steel Post
   - Anchor Sleeve - 12 Ga. 2 ½" x 2 ½" x 18" Square Steel Post
2. 14 Gauge posts must meet a certified minimum yield strength of 60,000 psi.
3. In all installations the first hole above the finished grade line on the sign post, anchor, and anchor sleeve must be in line for the insertion of the corner bolt.
4. The maximum area for one sign post is 9.0 square feet. A sign or combination of signs with an area greater than 9.0 square feet will require two posts. Also, signs with a width greater than 36" (not including 36" x 36" diamond shaped signs) will require two posts.

CITY OF LEE'S SUMMIT
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
220 SE GREEN STREET
LEE'S SUMMIT, MISSOURI 64063
PHONE: (816) 969-1800 FAX: (816) 969-1809

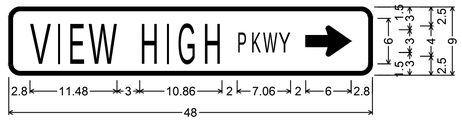
Project:
SIGN POST DETAILS
Sheet Name: STANDARD DRAWING SN-2

Drawn By: AS
Checked By: JW
Date: 08/26/2009
Project#



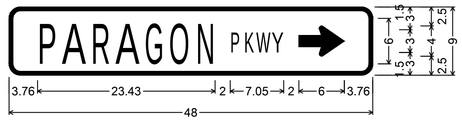
D3-1;
1.50" Radius, 0.50" Border, White on, Green;
"VIEW HIGH", C 75% spacing; "DR", C;
Standard Arrow Custom 6.00" X 4.00" 0';
Table of distances between letter and object lefts

1.67	V	4.42	I	1.79	E	3.51	W	7.50	H	4.23	I	1.79	G
4.23	H	5.28	D	2.27	R	3.64	→	6.00		1.67			



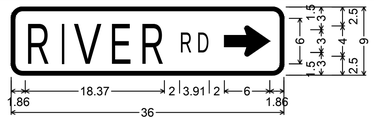
D3-1;
1.50" Radius, 0.50" Border, White on, Green;
"VIEW HIGH", B 75% spacing; "PKWY", B;
Standard Arrow Custom 6.00" X 4.00" 0';
Table of distances between letter and object lefts

2.80	V	3.44	I	1.59	E	2.70	W	6.75	H	3.37	I	1.59	G
3.37	H	4.53	P	1.83	K	1.61	W	2.02	Y	3.60	→	6.00	2.80



D3-1;
1.50" Radius, 0.50" Border, White on, Green;
"PARAGON", B 75% spacing; "PKWY", B;
Standard Arrow Custom 6.00" X 4.00" 0';
Table of distances between letter and object lefts

3.76	P	3.20	A	3.86	R	3.21	A	3.86	C	3.21	D	3.56	N
4.53	P	1.82	K	1.62	W	2.02	Y	3.59	→	6.00	3.76		



D3-1;
1.50" Radius, 0.50" Border, White on, Green;
"RIVER", C; "RD", C;
Standard Arrow Custom 6.00" X 4.00" 0';
Table of distances between letter and object lefts

1.86	R	4.55	I	1.85	V	4.67	E	4.02	R	5.28	R	2.27	D
3.64	→	6.00	1.86										

STATE OF MISSOURI
CLINT LOUMASTER
NUMBER PE-2011009651
11/4/2020
REGISTERED PROFESSIONAL ENGINEER

GBA architects engineers
9801 Renner Boulevard
Lenexa, Kansas 66219
913.492.0400
www.gbateam.com

DATE:	11-4-2020
DESIGN BY:	DJM
DRAWN BY:	CMN
PROJECT NO.:	12720
SHEET NO.	49
TOTAL SHEETS	51

Christopher Novosel
Professional Engineer
License No. 2018024421

Street and Storm Sewer Plans
Paragon Parkway
Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing 10/16/2020		

Signing Details 3 of 3

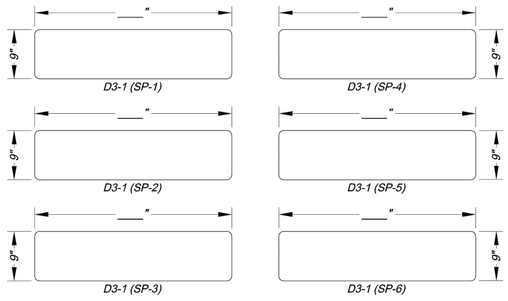
STANDARD ABBREVIATION LISTS

Named Streets	
Avenue	AVE
Boulevard	BLVD
Circle	CIR
Creek	CR
Court	CT
Crossing	XING
Drive	DR
Highway	HWY
Lane	LN
Parkway	PKWY
Place	PL
Road	RD
Street	ST
Terrace	TER
Trail	TRL
Way	WAY

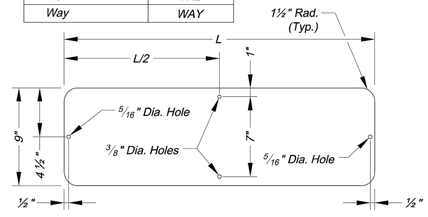
Numbered Streets	
First	ST
Second	ND
Third	RD
Fourth to Tenth	TH

STREET NAME SIGN QUANTITIES

Sign Designation	Sign Size	Sign Area (Sq. Ft.)	Number	Quantity (Sq. Ft.)
~~D3-1 (SP-1) View High Dr~~	~~48"x 9"~~	~~3.0~~ Sq. Ft.	1	1
~~D3-1 (SP-2) View High Pkwy~~	~~48"x 9"~~	~~3.0~~		
~~D3-1 (SP-3) Paragon Pkwy~~	~~48"x 9"~~	~~3.0~~	~~1~~	~~3.0~~
~~D3-1 (SP-4) River Rd~~	~~36"x 9"~~	~~2.25~~		
D3-1 (SP-5)	9" x			
D3-1 (SP-6)	9" x			

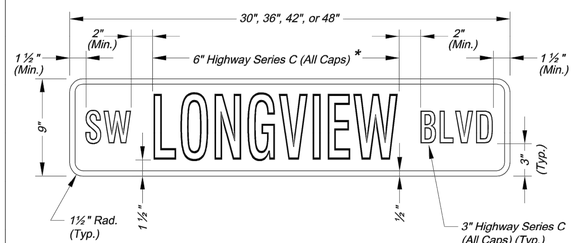


PROJECT SIGN DETAILS SEE ABOVE



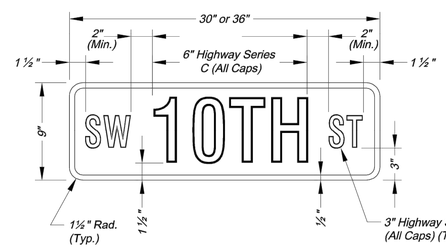
STREET NAME SIGN BLANK DETAILS

For Mounting on Square Steel Posts

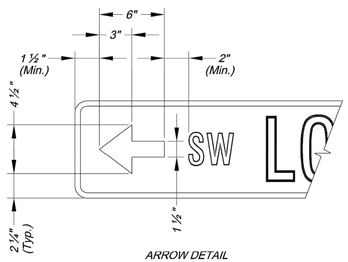


NAMED STREET NAME SIGN DETAIL

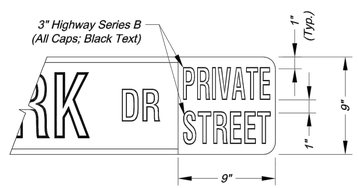
* *Use Highway Series B (All Caps) in lieu of series C if necesary to fit text on a 36" sign blank.*



NUMBERED STREET NAME SIGN DETAIL



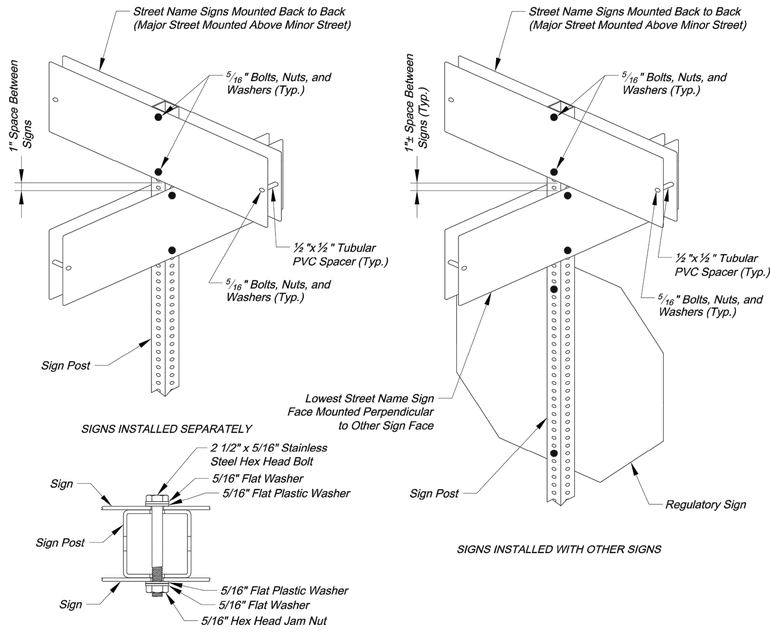
ARROW DETAIL



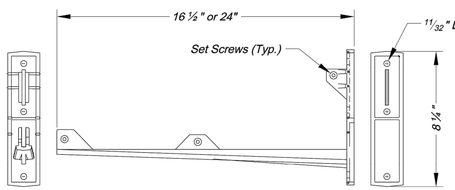
PRIVATE STREET TAG DETAIL

NOTES:
1. *For all street name signs, the legend shall be white and the background shall be green.*
2. *Arrows shall be added to street name signs where the name of a street changes at an intersection. Street name signs with arrows are to be installed on each side of the intersection to indicate the change in names. Arrows shall be white.*
3. *The "PRIVATE STREET" tag should be added to the end of street name signs to indicate where a street that is outside the right-of-way intersects a public street. The background for the "PRIVATE STREET" tag shall be yellow.*

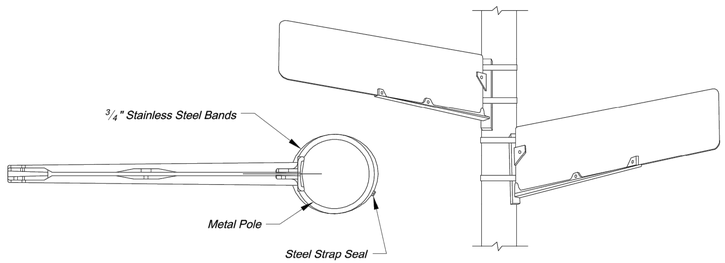
STREET NAME SIGN FACE DETAILS



SQUARE STEEL POST MOUNTING DETAILS



NOTES:
1. *Wing bracket shall be an L-shaped cantilever of T-beam rigid frame 380-3 aluminum alloy construction.*
2. *Mount each wing bracket to metal pole using two ¾" wide stainless steel straps.*
3. *One wing bracket shall be installed per each sign. Cross brackets are not allowed.*



WING BRACKET MOUNTING DETAILS

CITY OF LEE'S SUMMIT
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
220 SE GREEN STREET
LEE'S SUMMIT, MISSOURI 64063
PHONE: (816) 969-1800 FAX: (816) 969-1809

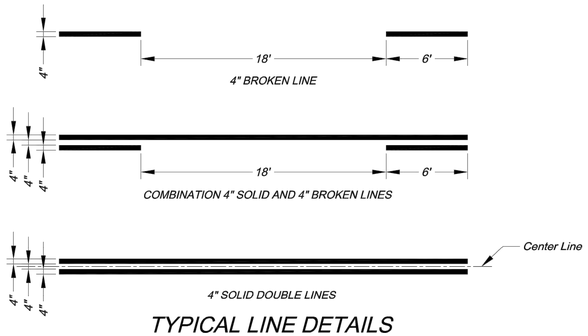
Project: STREET NAME SIGN DETAILS
Sheet Name: STANDARD DRAWING SN-3

Drawn By: AS
Checked By: JW
Date: 08/26/2009
Project#

3 OF 3

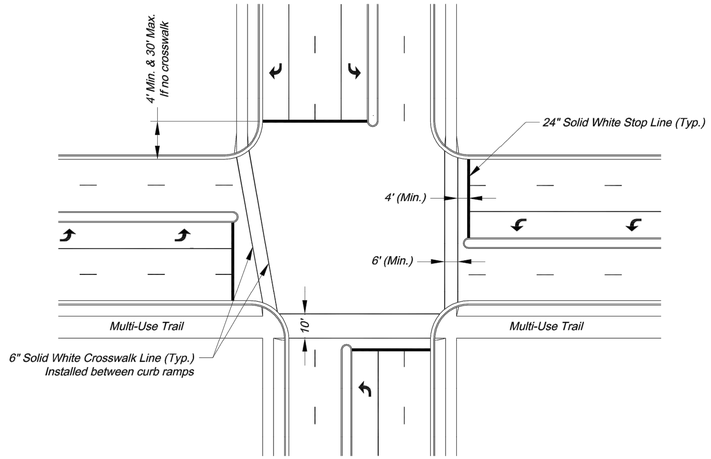
3

Pavement Marking Details 1 of 2



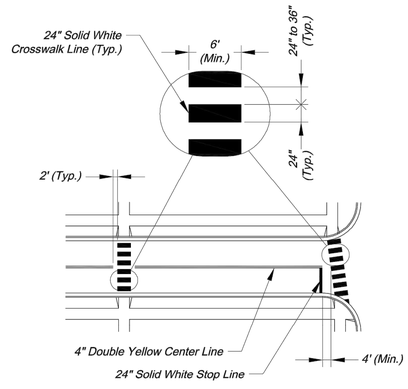
TYPICAL LINE DETAILS

NOTES:
1. All edge line, center line, and lane line pavement markings shall be 4" wide unless otherwise noted.
2. Edge lines shall be continuous solid white or yellow lines. Right side edge lines shall be solid white. Median or left side edge lines on divided roadways are to be solid yellow. Edge lines and center lines shall be continuous across driveways.

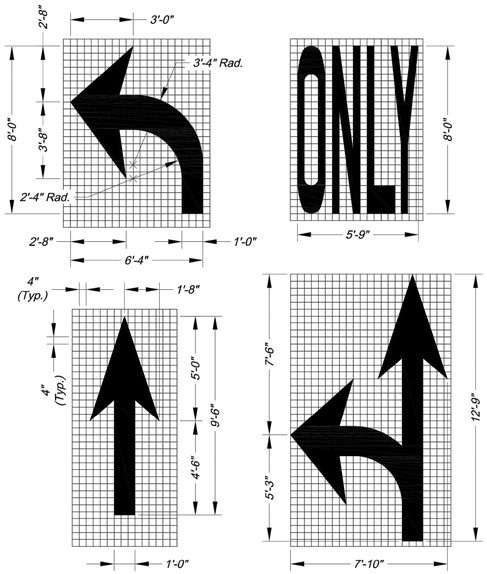


TYPICAL INTERSECTION MARKINGS

NOTES:
1. Transverse crosswalk lines shall be installed such that the distance between lines is at least 6 or 10 feet.
2. Stop lines are required at signalized intersections, on multi-lane stop controlled approaches, or in front of crosswalks at controlled intersections.

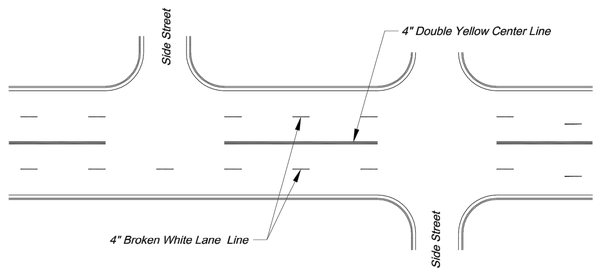


TYPICAL MIDBLOCK OR SCHOOL CROSS WALK

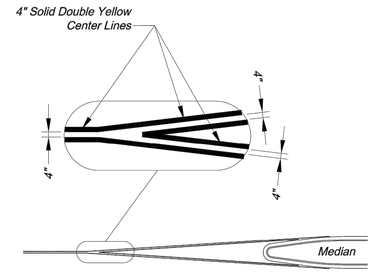


ARROW AND SYMBOL DETAILS

NOTES:
1. All arrow and symbol markings shall be white, and shall be centered in their respective traffic lanes.
2. Right-turn and combination right-turn/straight arrows are reverse of arrows shown.



TYPICAL MARKINGS FOR FOUR-LANE UNDIVIDED ROADWAY



TYPICAL MEDIAN NOSE CENTER LINE DETAIL

PAVEMENT MARKING GENERAL NOTES:
1. All pavement markings shall be in accordance with the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD) .
2. All words and symbols shall conform to the latest edition of Standard Alphabets for Highway Signs and Pavement Markings printed by the U.S. Department of Transportation, Federal Highway Administration.
3. Pavement markings, either temporary or permanent are required at all times if the roadway is open to traffic.
4. All pavement markings that conflict with the desired markings shall be completely removed. Removals shall not leave the road surface scarred with an image that misleads traffic. Any excess damage or scarring of pavement shall be repaired at the Contractor's expense.
5. The proposed permanent markings shall be laid out by the Contractor in advance of the marking installation. Markings shall not be applied until the layout has been approved by the City Traffic Engineer.
6. Center lines shall be marked on all undivided arterial streets, and any other undivided street with more than two lanes and/or a speed limit of 30 mph or more.
7. Edge lines shall be marked on all non-curbed streets.

STATE OF MISSOURI
CLINT LOUMASTER
NUMBER PE-2011009651
11/4/2020
REGISTERED PROFESSIONAL ENGINEER

GBA architects engineers
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DATE:	11-4-2020
DESIGN BY:	DJM
DRAWN BY:	CMN
PROJECT NO.:	12720
SHEET NO:	50
TOTAL SHEETS	51

Christopher Novosel
Professional Engineer
License No. 2018024421

Street and Storm Sewer Plans
Paragon Parkway
Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing 10/16/2020		

CITY OF LEE'S SUMMIT
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
220 SE GREEN STREET
LEE'S SUMMIT, MISSOURI 64063
PHONE: (816) 969-1800 FAX: (816) 969-1809

Project:
ROADWAY MARKING DETAILS
Sheet Name: STANDARD DRAWING PM-1

Drawn By: AS
Checked By: JW
Date: 09/09/2009
Project#

1 OF 2
1

STATE OF MISSOURI
CLINT LOUMASTER
NUMBER PE-2011009651
11/4/2020
REGISTERED PROFESSIONAL ENGINEER

GBA
architects
engineers
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Lenexa, Kansas 66219
913.492.0400
www.gbateam.com

DATE:	11-4-2020
DESIGN BY:	DJM
DRAWN BY:	CMN
PROJECT NO.:	12720
SHEET NO.:	51
TOTAL SHEETS	51

Christopher Novosel
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Street and Storm Sewer Plans
Paragon Parkway
Lee's Summit, Missouri

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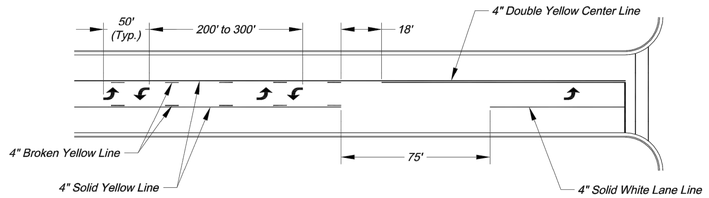
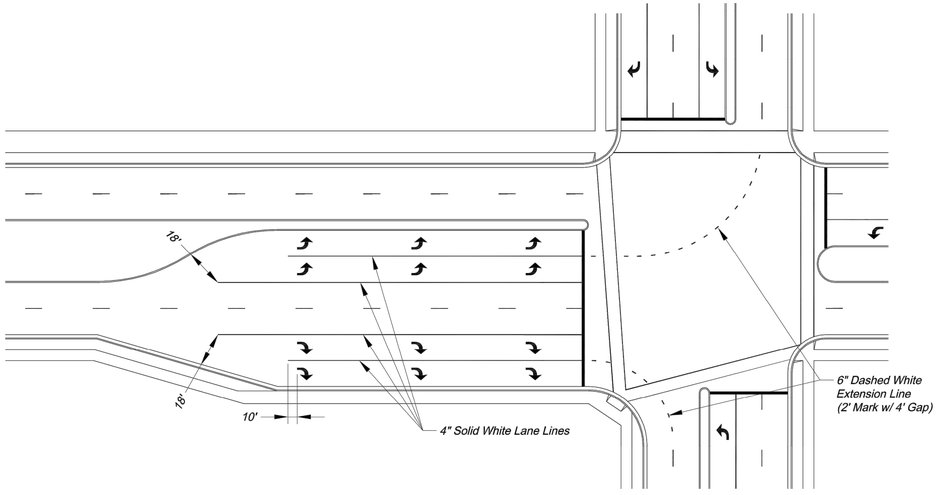
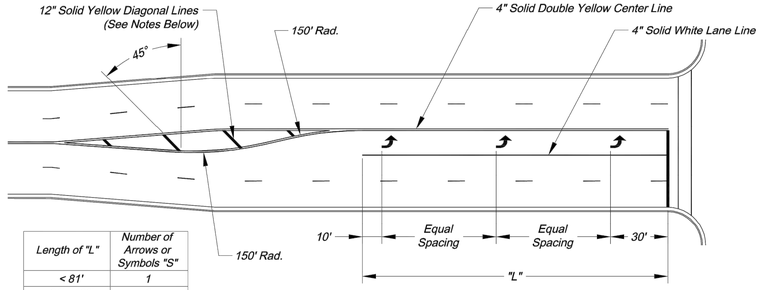


TYPICAL MARKINGS FOR TWO-WAY LEFT-TURN LANE



TYPICAL DUAL TURN LANE MARKINGS

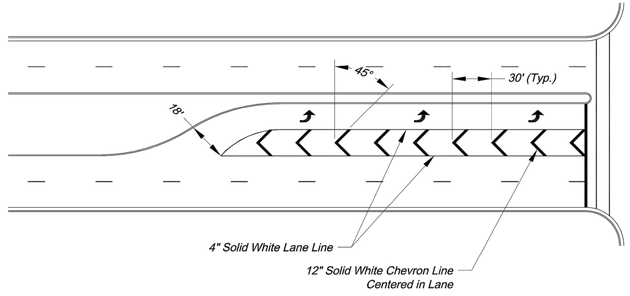
NOTE:
1. Dashed extension lines shall not extend through crosswalks.



Length of "L"	Number of Arrows or Symbols "S"
< 81'	1
81' - 120'	2
121' - 200'	3
201' - 280'	4
281' - 360'	5
361' - 440'	6

TYPICAL TURN LANE MARKINGS

NOTES:
1. Diagonal lines are required between centerlines if the width of the area between the center lines is greater than 12' and/or the length of the area between center lines is greater than 250'.
2. Diagonal lines should be spaced at 5' increments, equal to the posted speed limit.
3. Equal Spacing is calculated as (L - 40) / (S - 1).
4. When a through lane of traffic terminates as a mandatory turn lane, Arrow and "ONLY" symbols should be marked in the turn lane, in alternating order. The first and last symbols should be Arrows.



TYPICAL STRIPED OUT TURN LANE MARKINGS

CITY OF LEE'S SUMMIT
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
220 SE GREEN STREET
LEE'S SUMMIT, MISSOURI 64063
PHONE: (816) 969-1800 FAX: (816) 969-1809

Project: INTERSECTION MARKING DETAILS
Sheet Name: STANDARD DRAWING PM-2

Drawn By: AS
Checked By: JW
Date: 09/09/2009
Project#

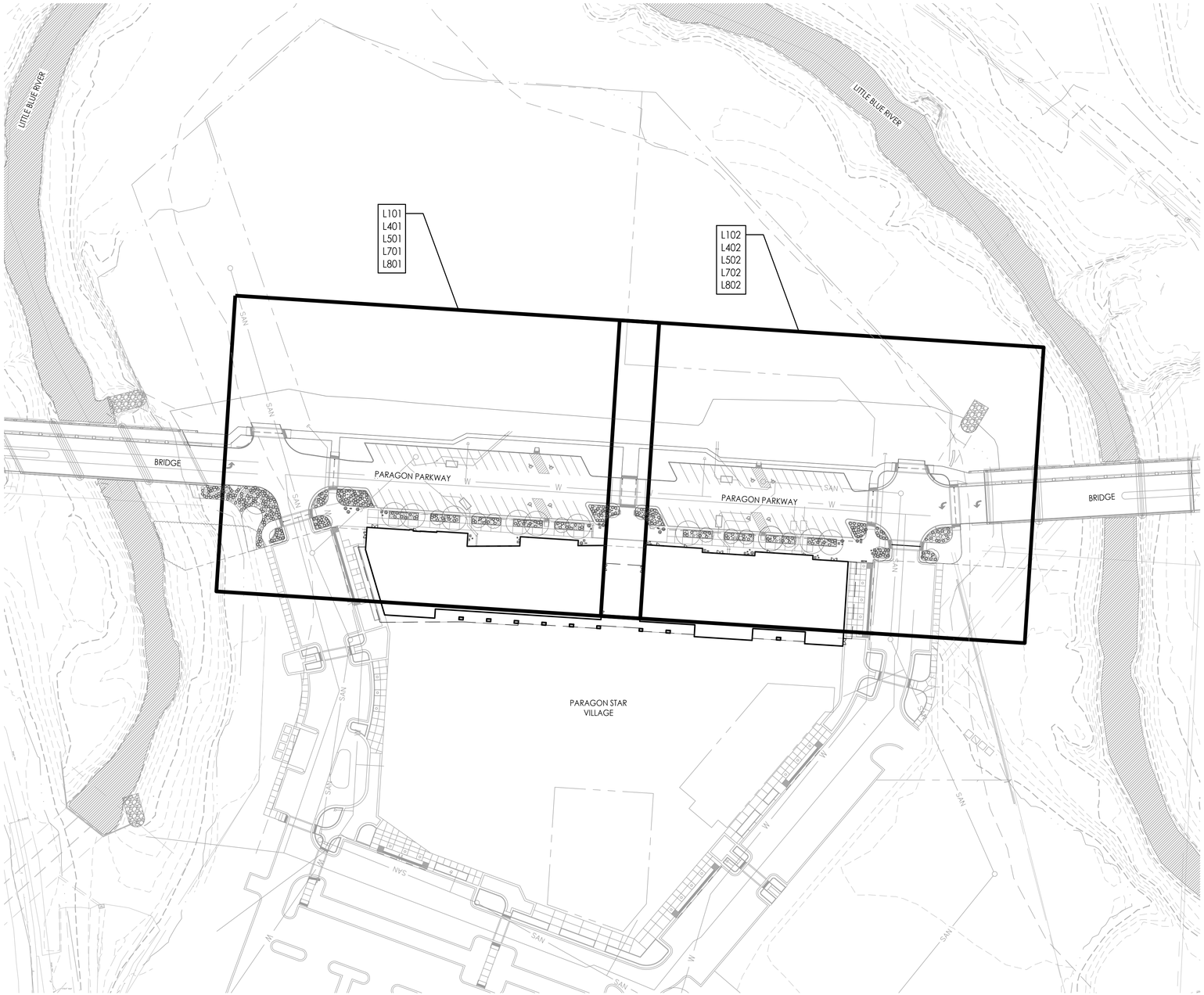
2 OF 2

2

GENERAL NOTES

1. ALL SITE AND UTILITY INFORMATION SHOWN IS BASED UPON INFORMATION AVAILABLE AT THE TIME OF DESIGN. VERIFY ALL SITE CONDITIONS, ELEVATIONS, UTILITY LOCATIONS AND DIMENSIONS INCLUDING NEW IMPROVEMENTS PRIOR TO COMMENCEMENT OF WORK. NOTIFY OWNER REPRESENTATIVE OF ANY DISCREPANCIES OR IRREGULAR CONDITIONS. CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES BY CONTACTING ALL OF THE RESPECTIVE UTILITY COMPANIES AND/ OR THE LOCAL "ONE-CALL"/"CALL-BEFORE-YOU-DIG" SYSTEM AND BY EXCAVATING TEST PITS IF NECESSARY.

2. ALL DIMENSIONS SHOWN ARE REPRESENTED USING U.S. SURVEY DIMENSION STANDARDS.



1 **KEY PLAN**
Scale: 1" = 60'-0"

60 30 0 60 180
SCALE= 1:60

STATE OF MISSOURI
ROBERT JUSTIN HEAD
NUMBER
PLA-2008003007
LANDSCAPE ARCHITECT
11-04-20

LAND3 Studio - Landscape Architect
MO LA Corp# 2008001860

GBA
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DATE:	11-4-2020
DESIGN BY:	
DRAWN BY:	RWB/EDD
PROJECT NO.:	12720
SHEET NO.	52
TOTAL SHEETS	67

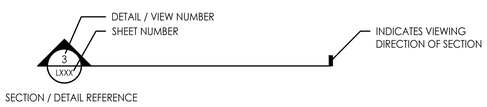
Street and Storm Sewer Plans

Paragon Parkway

Lee's Summit, Missouri

NO.	DATE		REVISIONS	BY	APPROVED
	10/16/20		Issued for Pricing		

SYMBOLS LEGEND

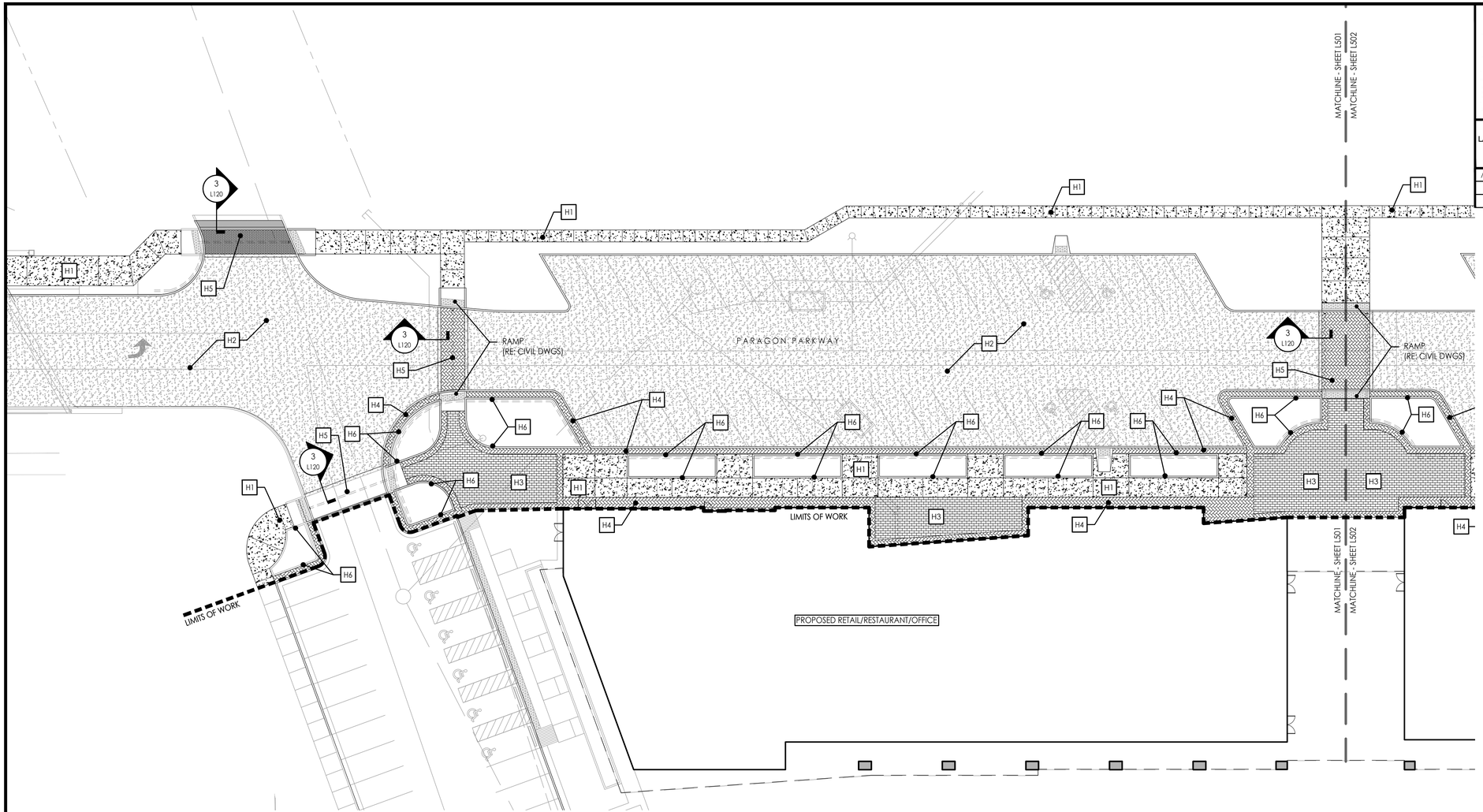


COMMON ABBREVIATIONS

APPROX	APPROXIMATE	MH	MANHOLE
ARCH	ARCHITECT	MIN	MINIMUM
AVG	AVERAGE	MISC	MISCELLANEOUS
B&B	BALLED AND BURLAPPED	N	NORTH
BC	BOTTOM OF CURB	NIC	NOT IN CONTRACT
BLDG	BUILDING	NO	NUMBER
BM	BENCHMARK	NOM	NOMINAL
BOC	BACK OF CURB	NTS	NOT TO SCALE
BW	BOTTOM OF WALL	OC	ON CENTER
CAL	CALIPER	OD	OUTSIDE DIAMETER
CB	CATCH BASIN	PC	POINT OF CURVATURE
CF	CUBIC FEET	PE	POLYURETHANE
CIP	CAST IN PLACE	PERF	PERFORATED
CL	CENTERLINE	PI	POINT OF INTERSECTION
CLR	CLEAR, CLEARANCE	PL	PROPERTY LINE
CJ	CONTROL JOINT	PT	POINT, POINT OF TANGENCY
CM	CENTIMETER	PVC	POLYVINYL CHLORIDE
CO	CLEAN OUT	QTY	QUANTITY
CONT	CONTINUOUS	R	RADIUS
CY	CUBIC YARD	RE	REFERENCE, REFER TO
DEG	DEGREE	REINF	REINFORCED
DEMO	DEMOLISH, DEMOLITION	REQ'D	REQUIRED
DIA	DIAMETER	REV	REVISION, REVISED
DIM	DIMENSION	ROW	RIGHT OF WAY
DTL	DETAIL	S	SOUTH
DWG	DRAWING	SAN	SANITARY
E	EAST	SEC	SECTION
EA	EACH	SF	SQUARE FOOT (FEET)
EJ	EXPANSION JOINT	SHT	SHEET
EL	ELEVATION	SIM	SIMILAR
ENG	ENGINEER	SPECS	SPECIFICATIONS
EQ	EQUAL	STM	STORM SEWER
EST	ESTIMATE	SY	SQUARE YARD
E.W.	EACH WAY	STA	STATION
EXIST	EXISTING	STD	STANDARD
EXP	EXPANSION, EXPOSED	SYM	SYMMETRICAL
FFE	FINISHED FLOOR ELEVATION	T&B	TOP AND BOTTOM
FG	FINISHED GRADE	TBC	TOP OF BACK CURB
FL	FLOW LINE	TC	TOP OF CURB
FT	FOOT (FEET)	TF	TOP OF FOOTING
FTG	FOOTING	TH	THICK
GA	GAUGE	TOPO	TOPOGRAPHY
GEN	GENERAL	TW	TOP OF WALL
GR	GRADE ELEVATION	TYP	TYPICAL
HDPE	HIGH-DENSITY POLYURETHANE	VAR	VARIES
HORIZ	HORIZONTAL	VOL	VOLUME
HP	HIGH POINT	W/	WITH
HT	HEIGHT	W/O	WITHOUT
ID	INSIDE DIAMETER	WT	WEIGHT
INV	INVERT ELEVATION	WL	WATER LEVEL
IN	INCH(ES)	WWF	WELDED WIRE FABRIC
INCL	INCLUDE(D)	YD	YARD
JT	JOINT	@	AT
LF	LINEAR FEET		
LP	LOW POINT		
MAX	MAXIMUM		

L000

STREETSCAPE KEYPLAN & GENERAL INFORMATION



1 SURFACE FINISHES AND MATERIALS - PARAGON PARKWAY

Scale: 1"= 20'-0"

20 10 0 20 60

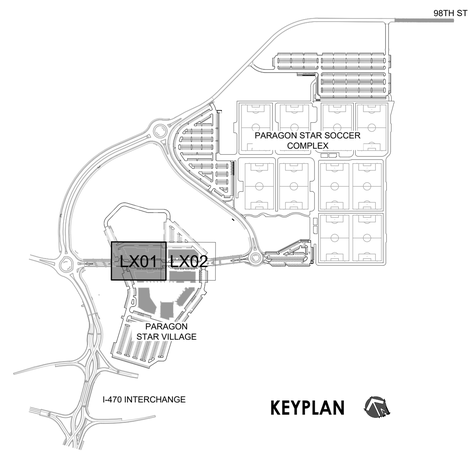
SCALE: 1"=20'

SURFACE FINISHES AND MATERIALS LEGEND

- H1 — CONCRETE SIDEWALK AND PAVER EDGE w/ MEDIUM BRUSH FINISH (REFER TO CIVIL DRAWINGS C- THROUGH C-
- H2 — CONCRETE ROAD PAVING (REFER TO CIVIL DWGS)
- H3 — TYPE 1 - PRECAST CONCRETE PAVERS (RUNNING BOND PATTERN) (RE: 1/L120)
- H4 — TYPE 2 - PRECAST CONCRETE PAVERS (HERRINGBONE PATTERN) (RE: 1/L120)
- H5 — TYPE 3 - HEAVY-DUTY PRECAST CONCRETE PAVERS (HERRINGBONE PATTERN) (RE: 2/L120)
- H6 — CONCRETE PLANTER CURB (RE: CIVIL DWGS)
- H7 — 6'x6' TREE GRATE (RE: 3/L120)

SURFACE FINISHES AND MATERIALS NOTES

1. THIS PLAN PROVIDES GENERAL LAYOUT AND TYPES OF HORIZONTAL SURFACE MATERIALS AND FINISHES TO BE PROVIDED BY THE CONTRACTOR. REFER TO THE FOLLOWING SPECIFICATION SECTIONS FOR COMPLETE SCOPE OF WORK, RESPONSIBILITIES, PRODUCTS AND EXECUTION OF WORK:
   - **SECTION 321316 - DECORATIVE FINISHES CONCRETE PAVING**
   - **SECTION 321400 - UNIT PAVING**
2. REFER TO CIVIL DRAWINGS C- THROUGH C- FOR DIMENSIONS AND LAYOUT OF PAVING SURFACE LIMITS. DIMENSIONS ON THIS DRAWING ARE PROVIDED FOR GENERAL ARRANGEMENT AND EXTENTS OF THE FINISHES TO BE PROVIDED.



KEYPLAN

L101
SURFACE FINISHES & MATERIALS PLAN

STATE OF MISSOURI
ROBERT RUSSELL HEAD
NUMBER
LA-2008003007
LANDSCAPE ARCHITECT
11-04-20

LAND3 Studio - Landscape Architect
MO LA Corp# 2008001860

GBA architects engineers
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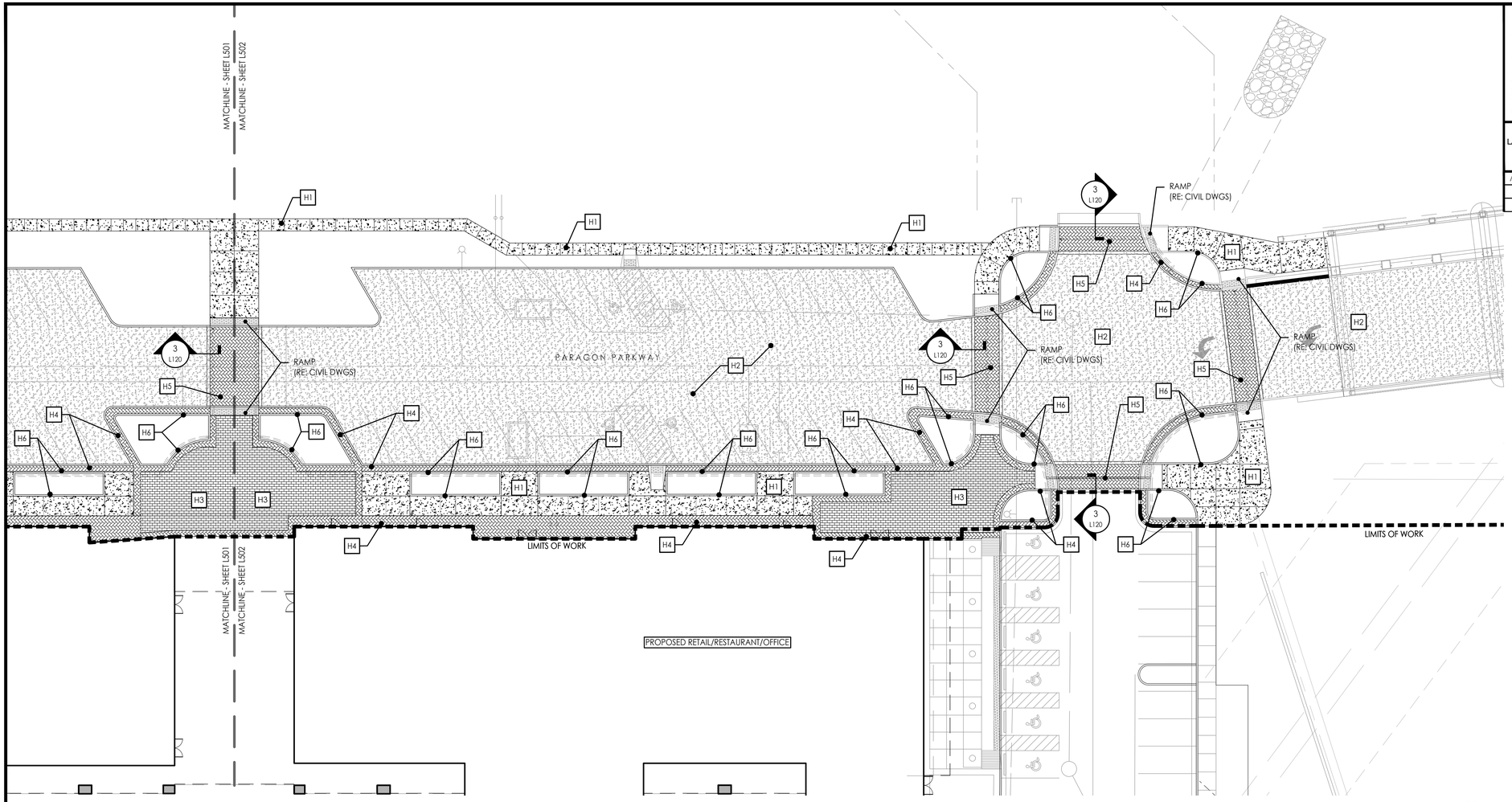
DATE:	11-4-2020
DESIGN BY:	
DRAWN BY:	RWB/EDD
PROJECT NO.:	12720
SHEET NO.:	53
TOTAL SHEETS	67

Street and Storm Sewer Plans

Paragon Parkway

Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing		



1 SURFACE FINISHES AND MATERIALS - PARAGON PARKWAY

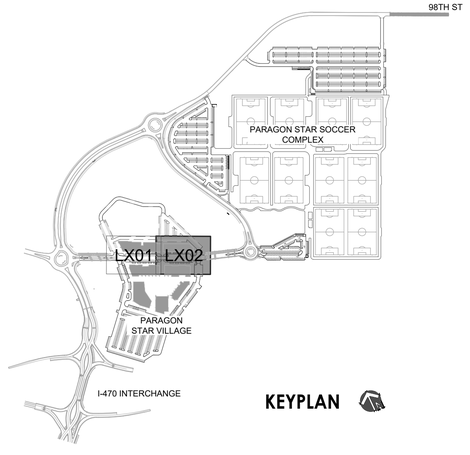
Scale: 1"= 20'-0"

SURFACE FINISHES AND MATERIALS LEGEND

H1	CONCRETE SIDEWALK AND PAVER EDGE w/ MEDIUM BRUSH FINISH (REFER TO CIVIL DRAWINGS C- THROUGH C-
H2	CONCRETE ROAD PAVING (REFER TO CIVIL DWGS)
H3	TYPE 1 - PRECAST CONCRETE PAVERS (RUNNING BOND PATTERN) (RE: 1/L120)
H4	TYPE 2 - PRECAST CONCRETE PAVERS (HERRINGBONE PATTERN) (RE: 1/L120)
H5	TYPE 3 - HEAVY-DUTY PRECAST CONCRETE PAVERS (HERRINGBONE PATTERN) (RE: 2/L120)
H6	CONCRETE PLANTER CURB (RE: CIVIL DWGS)
H7	6'x6' TREE GRATE (RE: 3/L120)

SURFACE FINISHES AND MATERIALS NOTES

1. THIS PLAN PROVIDES GENERAL LAYOUT AND TYPES OF HORIZONTAL SURFACE MATERIALS AND FINISHES TO BE PROVIDED BY THE CONTRACTOR. REFER TO THE FOLLOWING SPECIFICATION SECTIONS FOR COMPLETE SCOPE OF WORK, RESPONSIBILITIES, PRODUCTS AND EXECUTION OF WORK:
   - **SECTION 321316 - DECORATIVE FINISHES CONCRETE PAVING**
   - **SECTION 321400 - UNIT PAVING**
2. REFER TO CIVIL DRAWINGS C- THROUGH C- FOR DIMENSIONS AND LAYOUT OF PAVING SURFACE LIMITS. DIMENSIONS ON THIS DRAWING ARE PROVIDED FOR GENERAL ARRANGEMENT AND EXTENTS OF THE FINISHES TO BE PROVIDED.



KEYPLAN

L102
SURFACE FINISHES & MATERIALS PLAN

STATE OF MISSOURI
ROBERT JUSTIN HEAD
NUMBER
LA-2008003007
LANDSCAPE ARCHITECT
11-04-20

LAND3 Studio - Landscape Architect
MO LA Corp# 2008001860

GBA architects engineers
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DATE:	11-4-2020
DESIGN BY:	
DRAWN BY:	RWB/EDD
PROJECT NO.:	12720
SHEET NO:	54
TOTAL SHEETS	67

Street and Storm Sewer Plans
Paragon Parkway
Lee's Summit, Missouri

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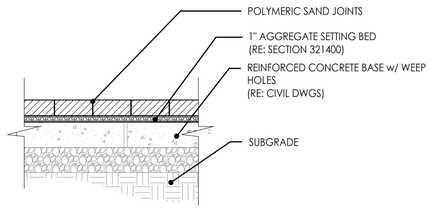
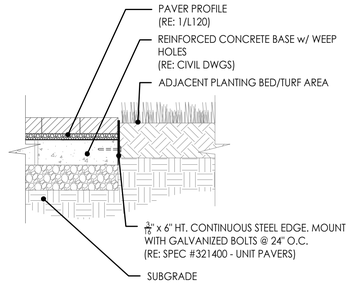
	10/16/20	Issued for Pricing		



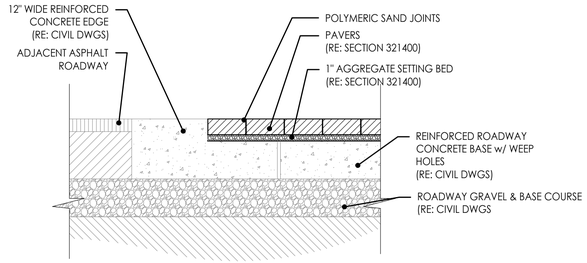
1 CONCRETE PAVER PROFILE TYP.

Scale: N.T.S.



2 PAVERS @ PLANTING EDGE

Scale: N.T.S.



3 CONCRETE PAVER ROADWAY PROFILE

Scale: N.T.S.

STATE OF MISSOURI
ROBERT RUSSELL HEAD
NUMBER
LA-2008003007
LANDSCAPE ARCHITECT
11-04-20

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DATE:	11-4-2020
DESIGN BY:	
DRAWN BY:	RWB/EDD
PROJECT NO.:	12720
SHEET NO.:	55
TOTAL SHEETS	67

LAND3 Studio - Landscape Architect
MO LA Corp# 2008001860

Street and Storm Sewer Plans

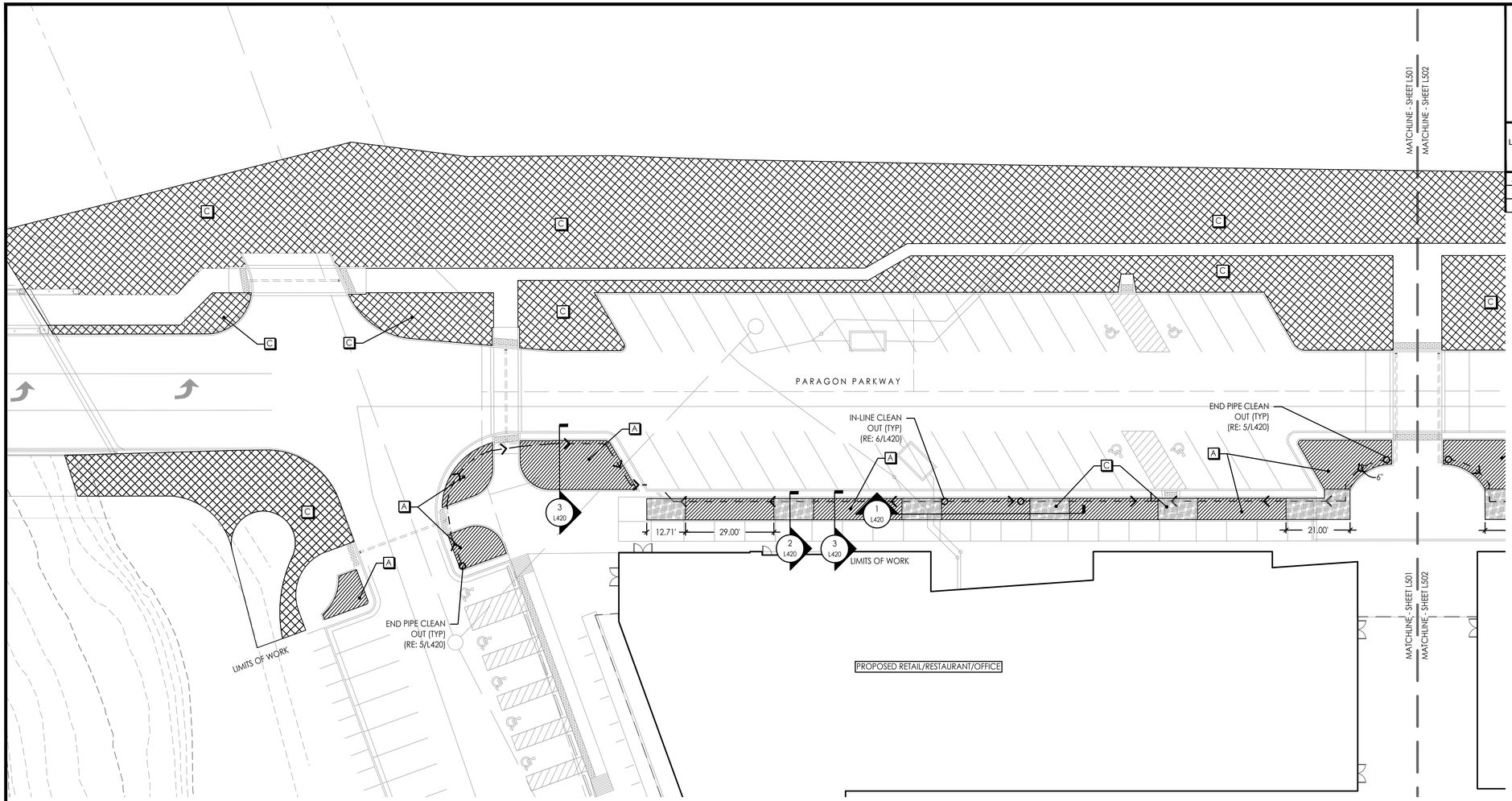
Paragon Parkway

Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing		

L120

HARDSCAPE DETAILS



20 10 0 20 60

SCALE: 1"=20'

1 SOILS & SUBDRAINAGE PLAN - VILLAGE PARKWAY WEST

Scale: 1"= 20'-0"

SOILS LEGEND

SYMBOL	DESCRIPTION	NOTES
A	SOIL TYPE A	PLANTING SOIL MIX (48" MIN. DEPTH) OVER DRAINAGE GRAVEL (6"-12" DEPTH) AND SUBDRAINAGE LINES CONNECTED TO STORM DRAIN SYSTEM. (RE; SECTION 329113)
B	SOIL TYPE B	STRUCTURAL SOIL (48" MIN DEPTH) OVER DRAINAGE GRAVEL (6" MIN DEPTH) AND SUBDRAINAGE LINES CONNECTED TO STORM DRAIN SYSTEM. (RE: SECTION 329113)
C	SOIL TYPE C	NATIVE TOPSOIL STRIPPED FROM SITE (12" MINIMUM)

SUBDRAINAGE LEGEND

DIRECTION OF PIPEFLOW — 6" PLANTING BED PERFORATED HDPE PIPE (RE: 7 / L420)

DIRECTION OF PIPEFLOW — 6" PLANTING BED SOLID HDPE PIPE (RE: 7 / L420)

SUBGRADE SLOPE TO DRAIN LINES

CLEANOUT (RE: 5 & 6 / L420)

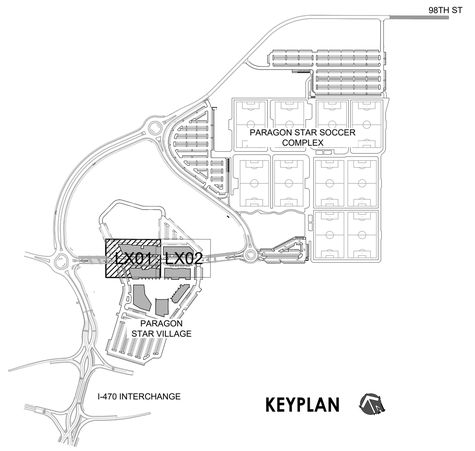
E--- SUBDRAINAGE PIPE ENDCAP (RE: 4 / L420)

SOILS NOTES

1. THIS PLAN PROVIDES DEPTHS AND LOCATIONS OF ALL LANDSCAPE SOILS AND SOIL MIXES TO BE PROVIDED BY THE LANDSCAPE CONTRACTOR. REFER TO **SECTION 329113 - SOIL PREPARATION** FOR COMPLETE SCOPE OF WORK, RESPONSIBILITIES, PRODUCTS AND EXECUTION OF WORK.

SUBDRAINAGE NOTES

1. THIS PLAN PROVIDES LAYOUT AND TYPES OF ALL LANDSCAPE SUBDRAINAGE TO BE PROVIDED & INSTALLED BY THE LANDSCAPE CONTRACTOR. REFER TO **SECTION 334610 - LANDSCAPE SUBDRAINAGE** FOR COMPLETE SCOPE OF WORK, RESPONSIBILITIES, PRODUCTS AND EXECUTION OF WORK.
2. ALL SUBDRAINAGE COLLECTOR PIPE SHALL BE INSTALLED AT A MINIMUM 0.5% SLOPE UNLESS OTHERWISE NOTED.
3. CONTRACTOR SHALL RESTORE SUBGRADE TO MEET GRADING AND COMPACTION REQUIREMENTS PER DRAWINGS AND SPECIFICATIONS.
4. CONTRACTOR TO PROTECT DRAIN LINES DURING CONSTRUCTION FROM DEBRIS (INCLUDING SOIL OR GRAVEL MATERIAL OR OTHER TRASH) FROM ENTERING OR BLOCKING LINES.
5. CONTRACTOR TO AVOID TRAFFIC OVER INSTALLED DRAINAGE TRENCHES TO PREVENT CRUSHING OF PIPE.
6. CLEANOUTS AT ENDS OF SUBDRAINAGE COLLECTORS ARE TYPICAL.
7. COORDINATE DRAINAGE CONNECTION AND INVERTS WITH AS-BUILT CONDITIONS.
8. SUBDRAINAGE LOCATION, LAYOUT, AND SITE CONDITIONS TO BE VERIFIED PRIOR TO CONSTRUCTION BY THE CONTRACTOR. NOTIFY OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES OR IRREGULAR CONDITIONS ENCOUNTERED DURING CONSTRUCTION.
9. CONTRACTOR TO COORDINATE DRAINAGE LINES WITH ALL UNDERGROUND UTILITIES.



KEYPLAN

L401

SOILS & SUBDRAINAGE PLAN

STATE OF MISSOURI
ROBERT G. HOUSEHOLD
LANDSCAPE ARCHITECT
#LA-2008001860
11-04-20

LAND3 Studio - Landscape Architect
MO LA Corp# 2008001860

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DATE:	11-4-2020
DESIGN BY:	
DRAWN BY:	RWB/EDD
PROJECT NO.:	12720
SHEET NO.	56
TOTAL SHEETS	67

Street and Storm Sewer Plans

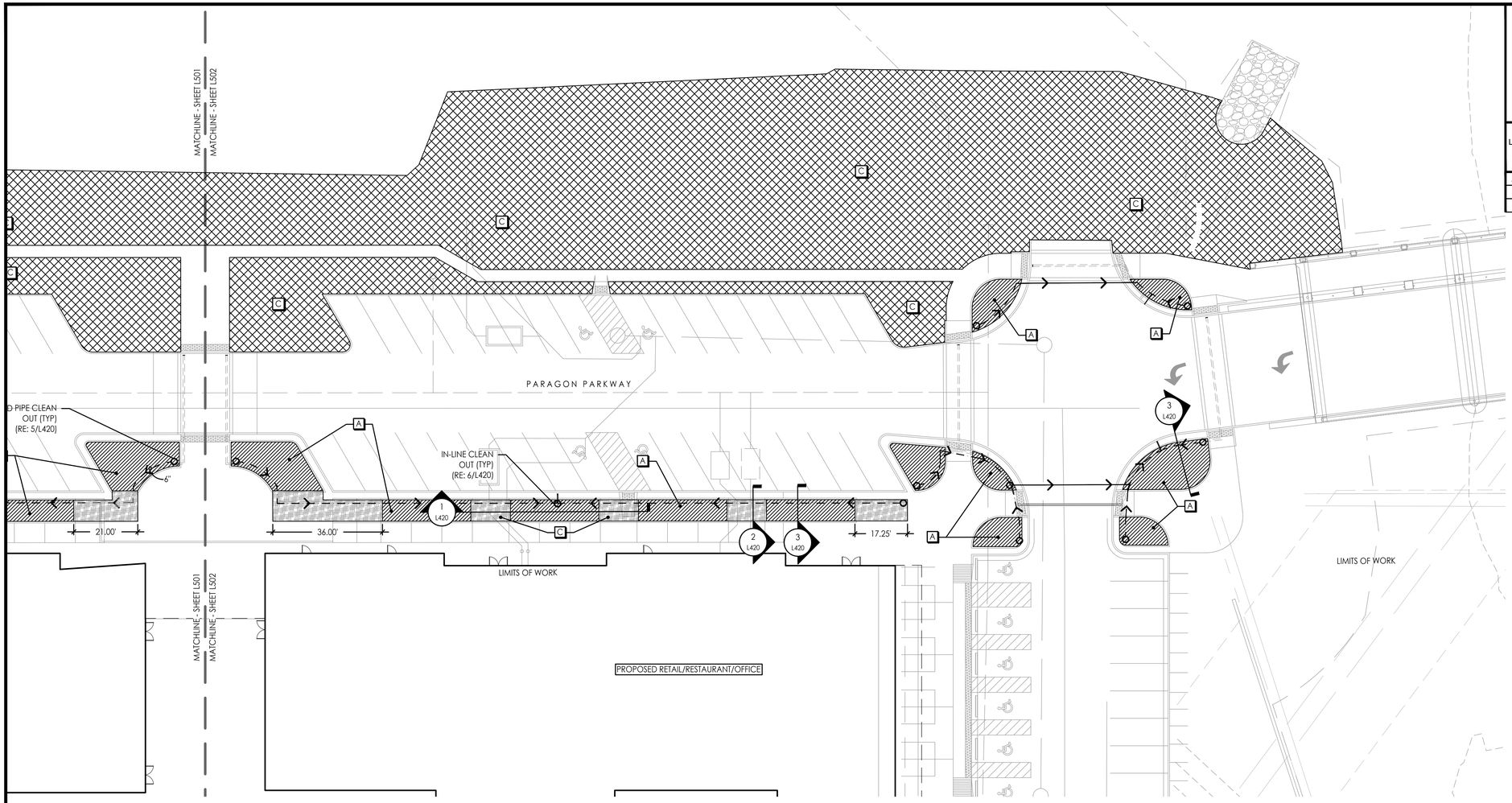
Paragon Parkway

Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing		

ERIC DAVIS 1:1

G:\Archive\2019\1249 - PARAGON VILLAGE\DRAWINGS\CAD\SHEETS\STREETSCAPE\L400 SOILS_SUBDRAINAGE - STREETSCAPE.dwg 11/6/2020 1:32:23 PM



1 **SOILS & SUBDRAINAGE PLAN - VILLAGE PARKWAY EAST**
Scale: 1"= 20'-0"

20 10 0 20 60
SCALE: 1"=20'

SOILS LEGEND

SYMBOL	DESCRIPTION	NOTES
A	SOIL TYPE A	PLANTING SOIL MIX (48" MIN. DEPTH) OVER DRAINAGE GRAVEL (6"-12" DEPTH) AND SUBDRAINAGE LINES CONNECTED TO STORM DRAIN SYSTEM. (RE; SECTION 329113)
B	SOIL TYPE B	STRUCTURAL SOIL (48" MIN DEPTH) OVER DRAINAGE GRAVEL (6" MIN DEPTH) AND SUBDRAINAGE LINES CONNECTED TO STORM DRAIN SYSTEM. (RE: SECTION 329113)
C	SOIL TYPE C	NATIVE TOPSOIL STRIPPED FROM SITE (12" MINIMUM)

SUBDRAINAGE LEGEND

DIRECTION OF PIPEFLOW — 6" PLANTING BED PERFORATED HDPE PIPE (RE: 7 / L420)

DIRECTION OF PIPEFLOW — 6" PLANTING BED SOLID HDPE PIPE (RE: 7 / L420)

SUBGRADE SLOPE TO DRAIN LINES

CLEANOUT (RE: 5 & 6 / L420)

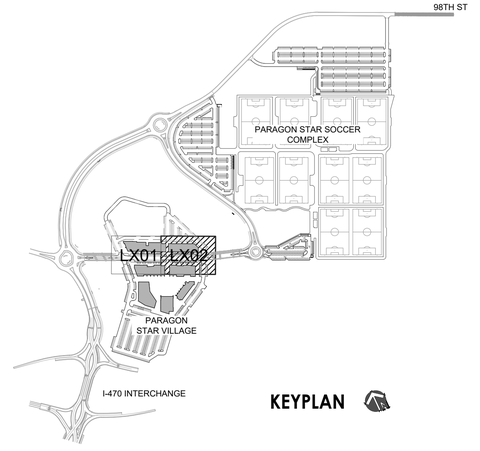
SUBDRAINAGE PIPE ENDCAP (RE: 4 / L420)

SOILS NOTES

1. THIS PLAN PROVIDES DEPTHS AND LOCATIONS OF ALL LANDSCAPE SOILS AND SOIL MIXES TO BE PROVIDED BY THE LANDSCAPE CONTRACTOR. REFER TO **SECTION 329113 - SOIL PREPARATION** FOR COMPLETE SCOPE OF WORK, RESPONSIBILITIES, PRODUCTS AND EXECUTION OF WORK.

SUBDRAINAGE NOTES

1. THIS PLAN PROVIDES LAYOUT AND TYPES OF ALL LANDSCAPE SUBDRAINAGE TO BE PROVIDED & INSTALLED BY THE LANDSCAPE CONTRACTOR. REFER TO **SECTION 334610 - LANDSCAPE SUBDRAINAGE** FOR COMPLETE SCOPE OF WORK, RESPONSIBILITIES, PRODUCTS AND EXECUTION OF WORK.
2. ALL SUBDRAINAGE COLLECTOR PIPE SHALL BE INSTALLED AT A MINIMUM 0.5% SLOPE UNLESS OTHERWISE NOTED.
3. CONTRACTOR SHALL RESTORE SUBGRADE TO MEET GRADING AND COMPACTION REQUIREMENTS PER DRAWINGS AND SPECIFICATIONS.
4. CONTRACTOR TO PROTECT DRAIN LINES DURING CONSTRUCTION FROM DEBRIS (INCLUDING SOIL OR GRAVEL MATERIAL OR OTHER TRASH) FROM ENTERING OR BLOCKING LINES.
5. CONTRACTOR TO AVOID TRAFFIC OVER INSTALLED DRAINAGE TRENCHES TO PREVENT CRUSHING OF PIPE.
6. CLEANOUTS AT ENDS OF SUBDRAINAGE COLLECTORS ARE TYPICAL.
7. COORDINATE DRAINAGE CONNECTION AND INVERTS WITH AS-BUILT CONDITIONS.
8. SUBDRAINAGE LOCATION, LAYOUT, AND SITE CONDITIONS TO BE VERIFIED PRIOR TO CONSTRUCTION BY THE CONTRACTOR. NOTIFY OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES OR IRREGULAR CONDITIONS ENCOUNTERED DURING CONSTRUCTION.
9. CONTRACTOR TO COORDINATE DRAINAGE LINES WITH ALL UNDERGROUND UTILITIES.



KEYPLAN

STATE OF MISSOURI
ROBERT JOSEPH HEAD
NUMBER
LA-2008003007
LANDSCAPE ARCHITECT
11-04-20

LAND3 Studio - Landscape Architect
MO LA Corp# 2008001860

GBA architects engineers
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DESIGN BY:	
DRAWN BY:	RWB/EDD
PROJECT NO.:	12720
SHEET NO.	57
TOTAL SHEETS	67

Street and Storm Sewer Plans
Paragon Parkway
Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
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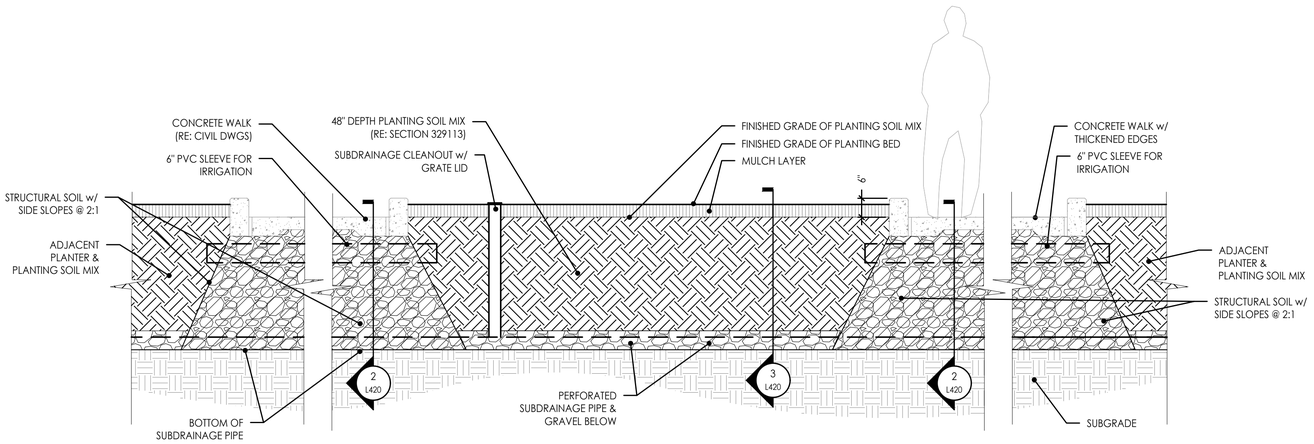
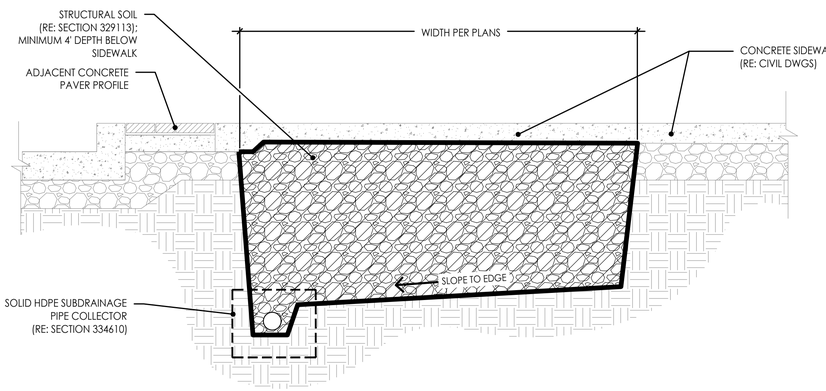
L402
SOILS & SUBDRAINAGE PLAN



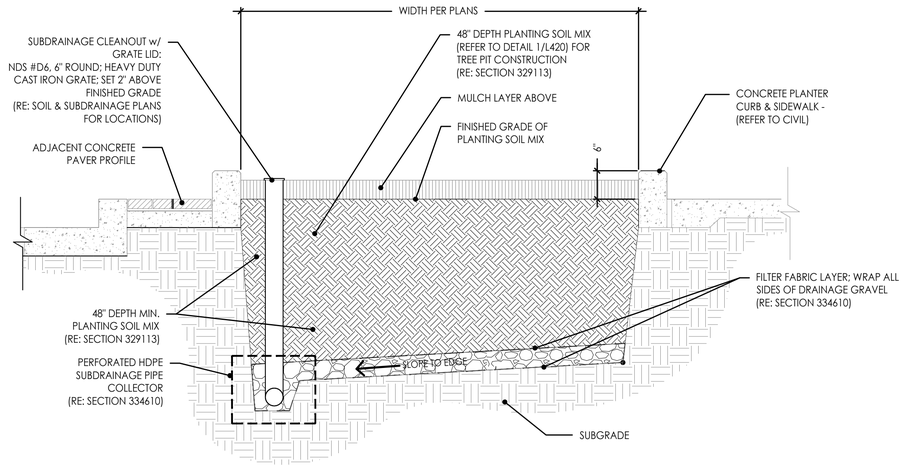
1 PLANTING TRENCH CONSTRUCTION

Scale: N.T.S.



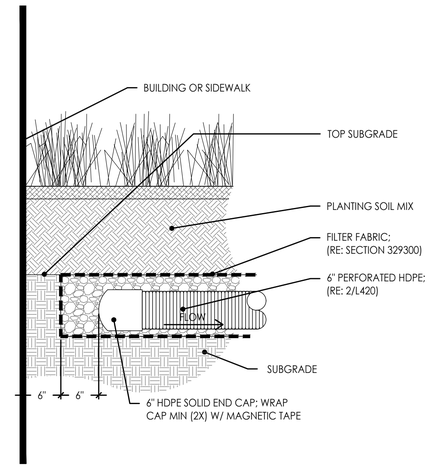
2 STRUCTURAL SOIL TRENCH BELOW CONCRETE SLAB

Scale: 3/4" = 1'-0"



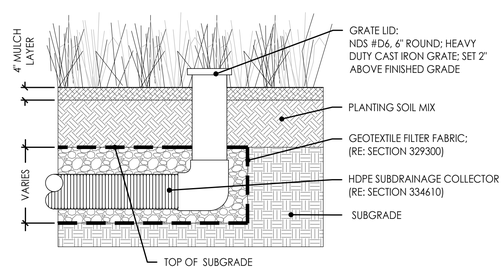
3 TREE WELL PLANTER TYP

Scale: N.T.S.



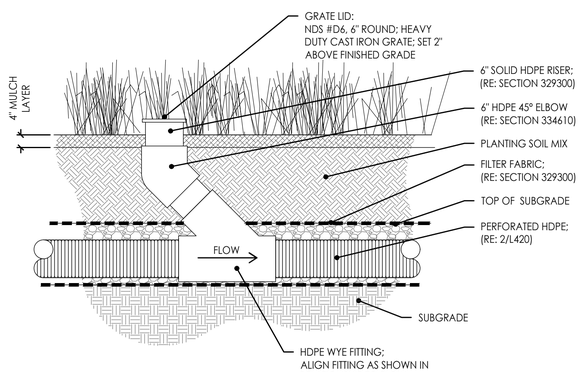
4 PLANTING SUBDRAINAGE ENDCAP

Scale: N.T.S.



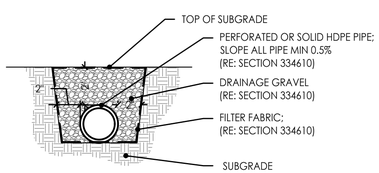
5 PLANTING SUBDRAINAGE ENDPIPE CLEANOUT

Scale: N.T.S.



6 PLANTING SUBDRAINAGE INLINE CLEANOUT

Scale: N.T.S.



7 PLANTING SUBDRAINAGE PIPE

Scale: N.T.S.

STATE OF MISSOURI
ERIC W. DAVIS
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11-04-20

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DATE:	11-4-2020
DESIGN BY:	
DRAWN BY:	RWB/EDD
PROJECT NO.:	12720
SHEET NO.:	58
TOTAL SHEETS:	67

LAND3 Studio - Landscape Architect
MO LA Corp# 2008001860

Street and Storm Sewer Plans

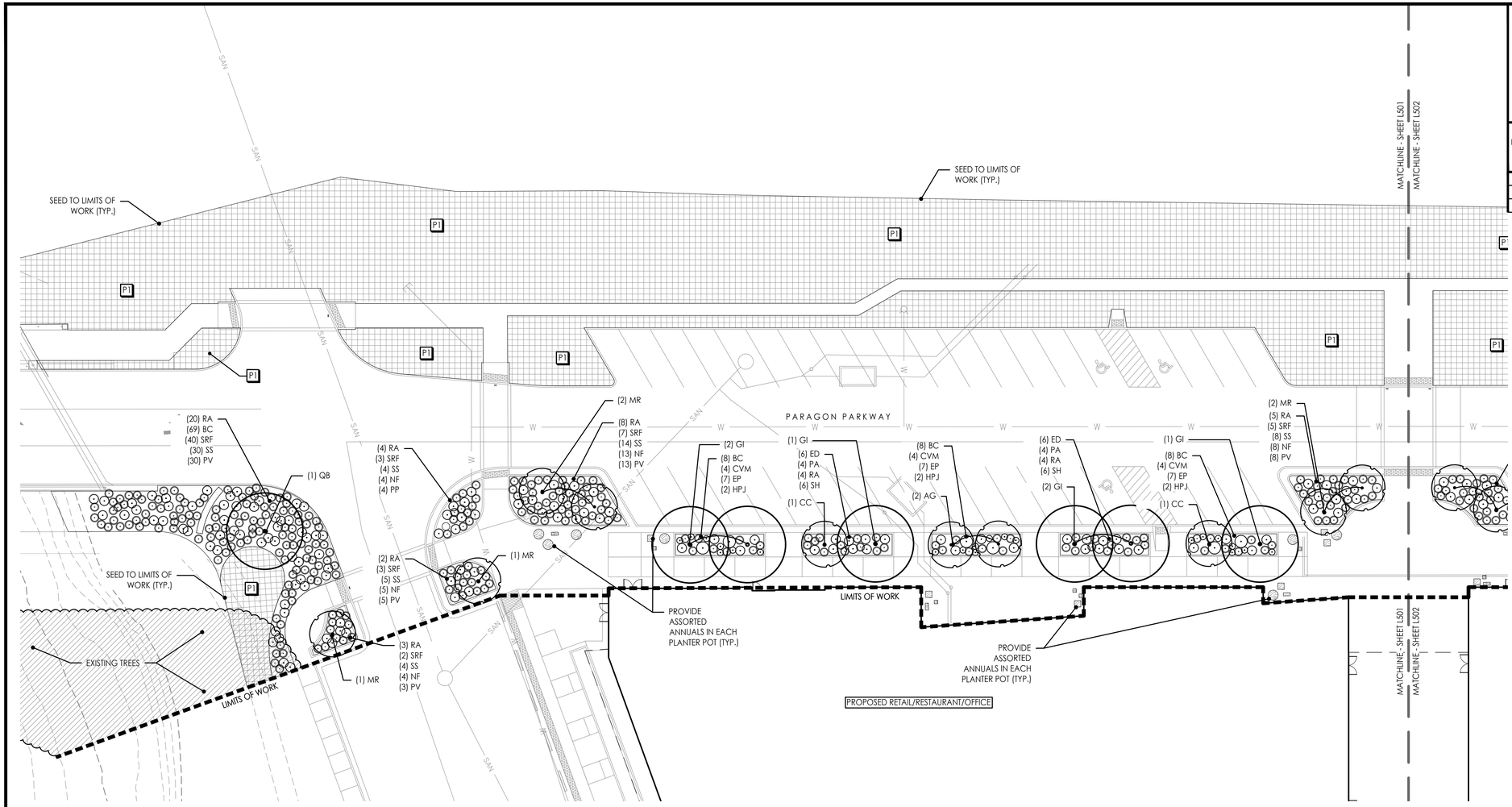
Paragon Parkway

Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing		

L420

SOILS & SUBDRAINAGE DETAILS



1 PLANTING PLAN - PARAGON PARKWAY

Scale: 1"= 20'-0"

PLANTING SCHEDULE

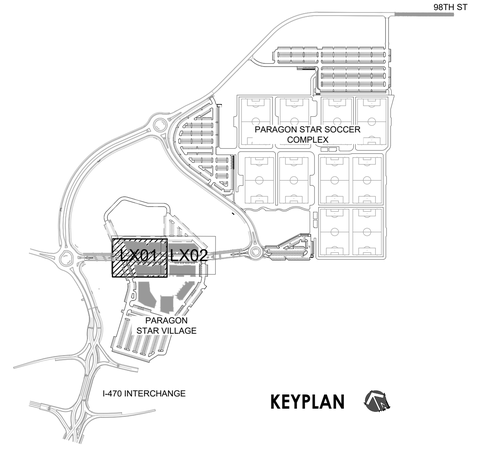
SYM.	KEY	COMMON NAME *BOTANICAL NAME*	SIZE & REMARKS
		SHADE/STREET TREES	
	AF	Autumn Blaze Maple *Acer freemanii 'Autumn Blaze'*	3" cal.
	CO	Hackberry *Celtis occidentalis*	3" cal.
	GT	Sunburst Honeylocust *Gleditsia triacanthos inermis 'Sunburst'*	3" cal.
	QB	Swamp White Oak *Quercus bicolor*	3" cal.
		ORNAMENTAL TREE	
	CC	Eastern Redbud *Cercis canadensis*	3" cal.
	MJ	Magnolia *Magnolia x 'Jane'*	3" cal.
	MA	Royal Raindrops® Crabapple *Malus 'JFS-KW5'*	3" cal.
	AG	Japanese Tree Lilac *Amelanchier x grandiflora 'Autumn Brilliance'*	3" cal.
		EVERGREEN TREE	
	JC	Perfecta Juniper *Juniperus chinensis 'Perfecta'*	8' ht. min.
	PA	Norway Spruce *Picea abies*	8' ht. min.
	PS	Eastern White Pine *Pinus strobus*	8' ht. min.

SYM.	KEY	COMMON NAME *BOTANICAL NAME*	SIZE & REMARKS
		DECIDUOUS SHRUB	
	RA	Grow-low Sumac *Rhus aromatica 'Gro-low'*	5 gal.
	HPJ	Little Lime® Hydrangea *Hydrangea paniculata 'Jane'*	5 gal.
		ORNAMENTAL GRASS	
	BC	Side Oats Grama Grass *Bouteloua curtipendula*	3 gal.
	PV	Shennadoah Switchgrass *Panicum virgatum 'Shennadoah'*	3 gal.
	SS	Little Bluestem *Schizachyrium scoparium*	1 gal.
	SH	Prairie Dropseed *Sporobolus heterolepis*	1 gal.
		PERENNIAL/GROUNDCOVER	
	SRF	Rough Goldenrod *Solidago rugosa 'Fireworks'*	1 gal.
	CVM	Moonbeam Coreopisi *Coreopsis verticillata 'Moonbeam*	1 gal.
	EP	Purple Coneflower *Echinacea purpurea 'Magnus'*	1 gal.
	PA	Russian Sage *Perovskia atriplicifolia*	3 gal.
	BC	Joe-pye Weed *Eupatorium dubium 'Little-Joe'*	1 gal.

SYM.	KEY	COMMON NAME *BOTANICAL NAME*	SIZE & REMARKS
		TURF/SEED MIXES	
P1		Native Prairie Seed Mix Butterfly Milkweed- Asclepias tuberosa (5%) Blue Wild Indigo- Baptisia australis (5%) New Jersey Tea- Ceanothus americanus (5%) Amethyst Vernal Witchhazel (10%) Switchgrass- Panicum virgatum (13%) Little Bluestem- Schizachyrium scoparium (30%) Indiangrass- Sorghastrum nutans (20%) Fall Aster - Symphotrichum oblongifolium (10%)	

PLANTING NOTES

1. THIS PLAN PROVIDES LAYOUT, QUANTITY & SIZES OF ALL PLANT MATERIAL TO BE INSTALLED BY THE LANDSCAPE CONTRACTOR. REFER TO **SECTION 329300 - PLANTS** AND **SECTION 329200 - TURF AND GRASSES** FOR COMPLETE SCOPE OF WORK, RESPONSIBILITIES, PRODUCTS & EXECUTION OF WORK.
2. CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES BY CONTACTING ALL OF THE RESPECTIVE UTILITY COMPANIES AND/ OR THE LOCAL "ONE-CALL"/"CALL-BEFORE-YOU-DIG" SYSTEM AND BY EXCAVATING TEST PITS IF NECESSARY.
3. LOCATIONS OF ALL PLANT MATERIALS SHALL BE STAKED IN THE FIELD AND APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO PLANTING.
4. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE TO SEED ALL DISTURBED AREAS BACK TO ORIGINAL FINISHED GRADE ELEVATIONS, INCLUDING, EQUIPMENT MATERIAL STORAGE AREA AND STAGING AREAS ADJACENT TO SITE.



KEYPLAN

L501
PLANTING PLAN

STATE OF MISSOURI
ROBERT JUSTIN HEAD
NUMBER
LA-2008003007
LANDSCAPE ARCHITECT
11-04-20

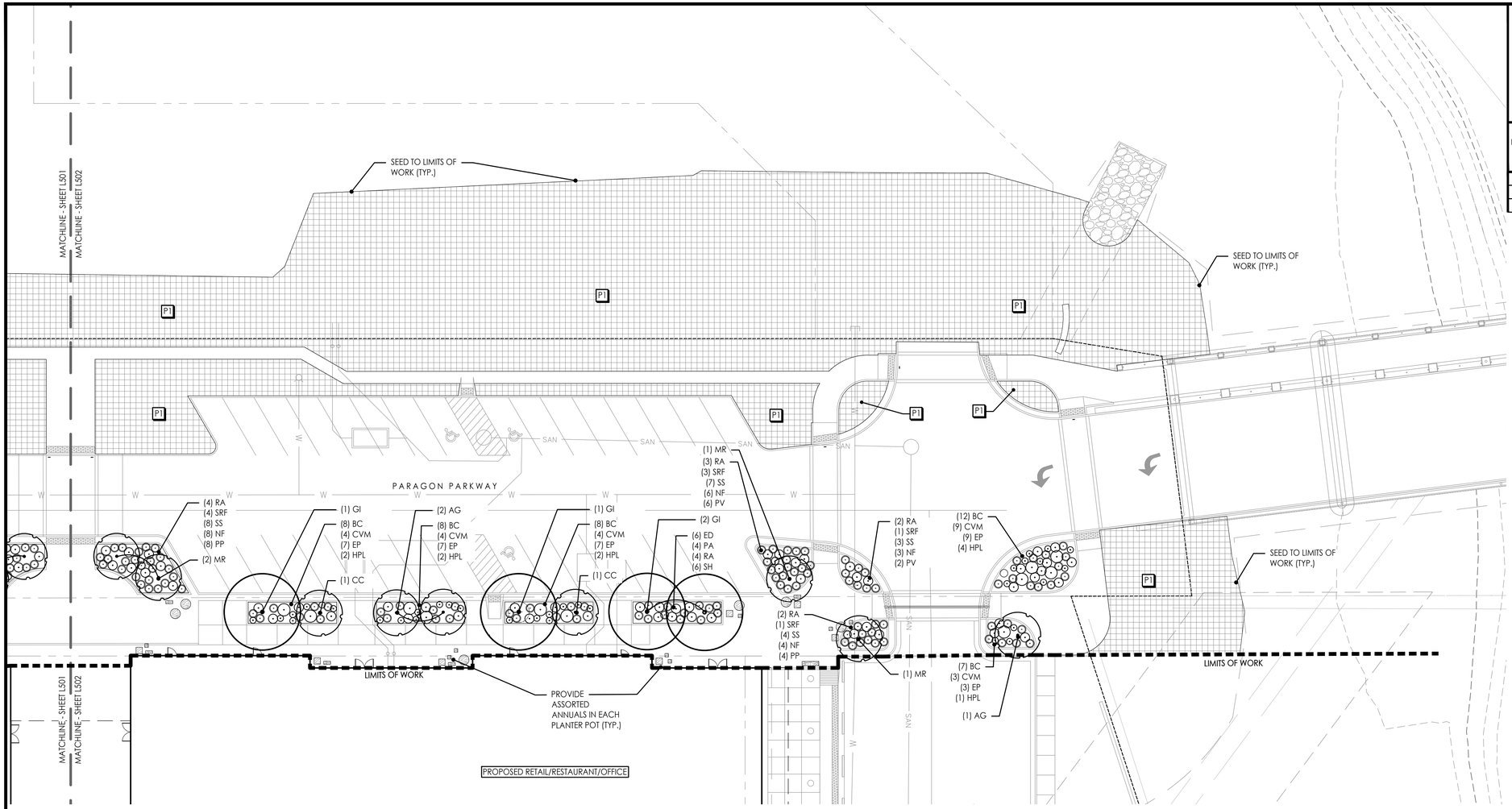
LAND3 Studio - Landscape Architect
MO LA Corp# 2008001860

GBA architects engineers
9801 Renner Boulevard
Lenexa, Kansas 66219
913.492.0400
www.gbateam.com

DATE:	11-4-2020
DESIGN BY:	
DRAWN BY:	RWB/EDD
PROJECT NO.:	12720
SHEET NO.:	59
TOTAL SHEETS	67

Street and Storm Sewer Plans
Paragon Parkway
Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing		



1 PLANTING PLAN - PARAGON PARKWAY

Scale: 1"= 20'-0"

SCALE: 1"=20'

PLANTING SCHEDULE

SYM.	KEY	COMMON NAME *BOTANICAL NAME*	SIZE & REMARKS
		SHADE/STREET TREES	
	AF	Autumn Blaze Maple *Acer freemanii 'Autumn Blaze'*	3" cal.
	CO	Hackberry *Celtis occidentalis*	3" cal.
	GT	Sunburst Honeylocust *Gleditsia triacanthos inermis 'Sunburst'*	3" cal.
	QB	Swamp White Oak *Quercus bicolor*	3" cal.
		ORNAMENTAL TREE	
	CC	Eastern Redbud *Cercis canadensis*	3" cal.
	MJ	Magnolia *Magnolia x 'Jane'*	3" cal.
	MA	Royal Raindrops® Crabapple *Malus 'JFS-KW5'*	3" cal.
	AG	Japanese Tree Lilac *Amelanchier x grandiflora 'Autumn Brilliance'*	3" cal.
		EVERGREEN TREE	
	JC	Perfecta Juniper *Juniperus chinensis 'Perfecta'*	8' ht. min.
	PA	Norway Spruce *Picea abies*	8' ht. min.
	PS	Eastern White Pine *Pinus strobus*	8' ht. min.

SYM.	KEY	COMMON NAME *BOTANICAL NAME*	SIZE & REMARKS
		DECIDUOUS SHRUB	
	RA	Grow-low Sumac *Rhus aromatica 'Gro-low'*	5 gal.
	HPJ	Little Lime® Hydrangea *Hydrangea paniculata 'Jane'*	5 gal.
		ORNAMENTAL GRASS	
	BC	Side Oats Grama Grass *Bouteloua curtipendula*	3 gal.
	PV	Shennadoah Switchgrass *Panicum virgatum 'Shennadoah'*	3 gal.
	SS	Little Bluestem *Schizachyrium scoparium*	1 gal.
	SH	Prairie Dropseed *Sporobolus heterolepis*	1 gal.
		PERENNIAL/GROUNDCOVER	
	SRF	Rough Goldenrod *Solidago rugosa 'Fireworks'*	1 gal.
	CVM	Moonbeam Coreopisi *Coreopsis verticillata 'Moonbeam*	1 gal.
	EP	Purple Coneflower *Echinacea purpurea 'Magnus'*	1 gal.
	PA	Russian Sage *Perovskia atriplicifolia*	3 gal.
	BC	Joe-pye Weed *Eupatorium dubium 'Little-Joe'*	1 gal.

SYM.	KEY	COMMON NAME *BOTANICAL NAME*	SIZE & REMARKS
		TURF/SEED MIXES	
P1		Native Prairie Seed Mix Butterfly Milkweed- Asclepias tuberosa (5%) Blue Wild Indigo- Baptisia australis (5%) New Jersey Tea- Ceanothus americanus (5%) Amethyst Vernal Witchhazel (10%) Switchgrass- Panicum virgatum (13%) Little Bluestem- Schizachyrium scoparium (30%) Indiangrass- Sorghastrum nutans (20%) Fall Aster - Symphotrichum oblongifolium (10%)	

PLANTING NOTES

1. THIS PLAN PROVIDES LAYOUT, QUANTITY & SIZES OF ALL PLANT MATERIAL TO BE INSTALLED BY THE LANDSCAPE CONTRACTOR. REFER TO **SECTION 329300 - PLANTS** AND **SECTION 329200 - TURF AND GRASSES** FOR COMPLETE SCOPE OF WORK, RESPONSIBILITIES, PRODUCTS & EXECUTION OF WORK.
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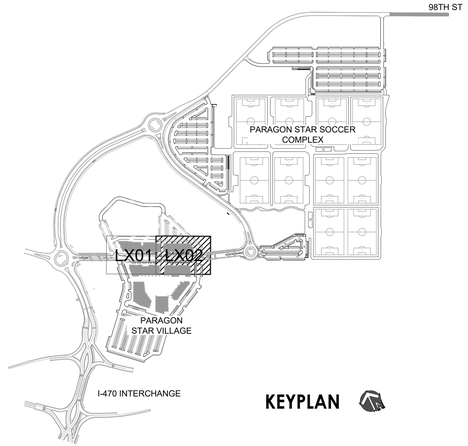


KEYPLAN

STATE OF MISSOURI
ROBERT JUSTIN HELD
NUMBER
LA-2008003007
LANDSCAPE ARCHITECT
11-04-20

LAND3 Studio - Landscape Architect
MO LA Corp# 2008001860

GBA architects engineers
9801 Renner Boulevard
Lenexa, Kansas 66219
913.492.0400
www.gbateam.com

DATE:	11-4-2020
DESIGN BY:	
DRAWN BY:	RWB/EDD
PROJECT NO.:	12720
SHEET NO.:	60
TOTAL SHEETS	67

Street and Storm Sewer Plans

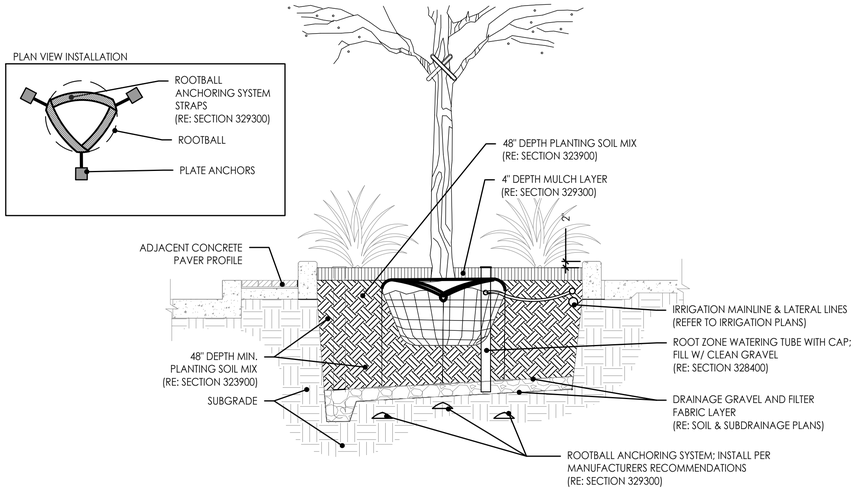
Paragon Parkway

Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing		

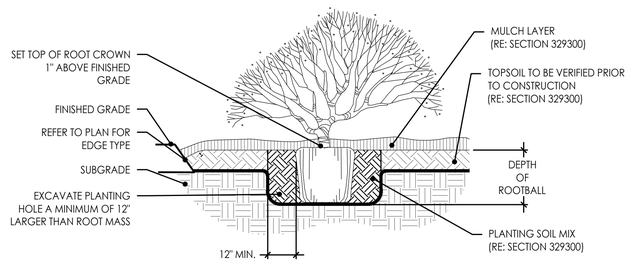
L502 PLANTING PLAN

1:1 ERIC DAVIS 11/6/2020 1:33:31 PM G:\Archive\2019\1249 - PARAGON VILLAGE\DRAWINGS\CAD\SHEETS\STREETSCAPE\L501 PLANTING.dwg



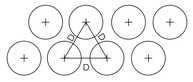
1 TREE IN RAISED CURB PLANTER

Scale: N.T.S.

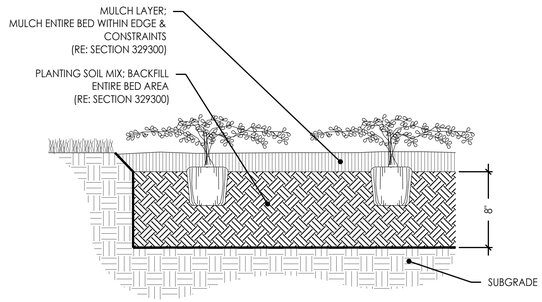


4 SHRUB

Scale: N.T.S.

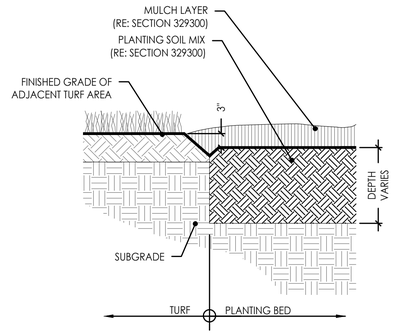


NOTE:
"D" = DIMENSION OF PLANT SPACING (SHRUBS & GROUNDCOVER AS INDICATED ON PLANS OR WITHIN PLANT SCHEDULE.



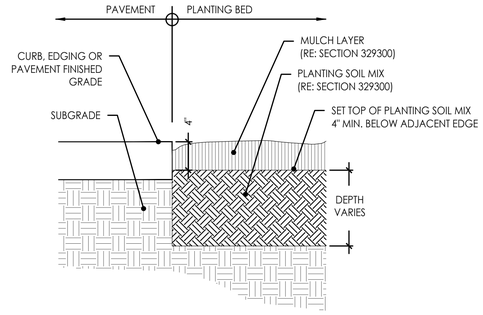
5 GROUNDCOVER

Scale: N.T.S.



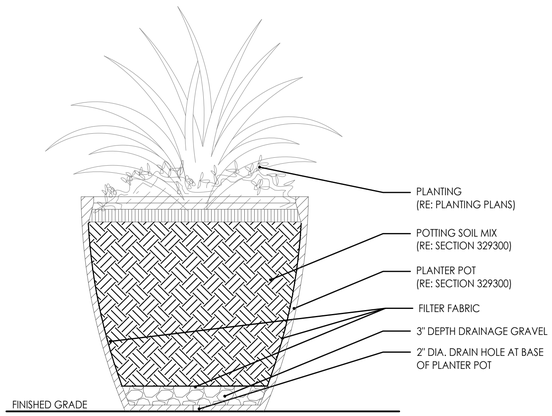
4 CULTIVATED EDGE

Scale: N.T.S.



5 PLANTING EDGE @ CONCRETE

Scale: N.T.S.



6 PLANTING POT-TYP.

Scale: N.T.S.

STATE OF MISSOURI
JEBORG JUSTIN HEAD
NUMBER LA-2008003001
LANDSCAPE ARCHITECT
11-04-20

GBA
architects
engineers
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DATE:	11-4-2020
DESIGN BY:	
DRAWN BY:	RWB/EDD
PROJECT NO.:	12720
SHEET NO.:	61
TOTAL SHEETS	67

LAND3 Studio - Landscape Architect
MO LA Corp# 2008001860

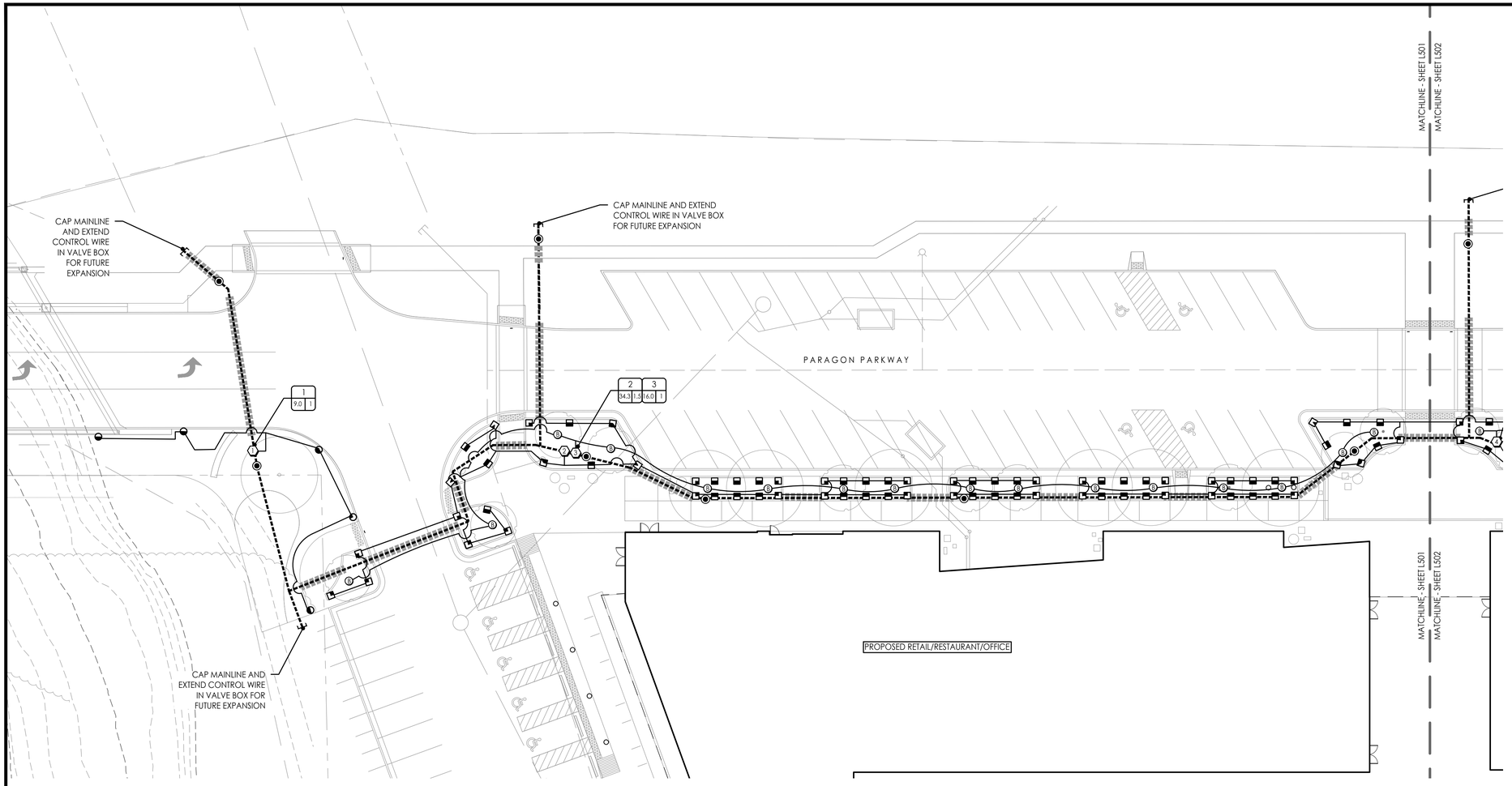
Street and Storm Sewer Plans

Paragon Parkway

Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing		

L520
PLANTING DETAILS



20 10 0 20 60

SCALE: 1"=20'

1 IRRIGATION PLAN - VILLAGE PARKWAY WEST

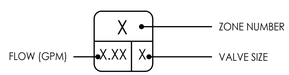
Scale: 1"= 20'-0"

IRRIGATION LEGEND

SYMBOL	DESCRIPTION	DETAIL
	2" PVC MAINLINE (SEE PLAN FOR SIZE)	RE: SECTION 328400 / RE: DETAIL 1/L720
	LATERAL LINE (1" UNLESS OTHERWISE NOTED)	RE: SECTION 328400 / RE: DETAIL 1/L720
	PVC PIPE SLEEVE (6" UNLESS OTHERWISE NOTED)	RE: DETAIL 2/L720
C	CONTROLLER	RE: DETAIL 3/L721
R	RAIN/FREEZE SENSOR	RE: DETAIL 4/L721
MV	MASTER VALVE	RE: DETAIL 6/L720
	BACKFLOW PREVENTER (N.I.C.)	RE: CIVIL DWGS
M	WATER METER (N.I.C.)	RE: CIVIL DWGS
RV	REMOTE CONTROL VALVE	RE: DETAIL 5/L720
B	ROOT WATERING SYSTEM	RE: DETAIL 10/L720
	ISOLATION VALVE	RE: DETAIL 3/L720
	QUICK COUPLER	RE: DETAIL 4/L720
FULL ARC 180 ARC 90 ARC 270 ARC	WATER DELIEVERY EQUIPMENT. REFER TO ZONE CHART SHEET XXX FOR MODEL NUMBERS, BODY TYPE, AND NOZZLE.	
FULL STRIP HALF STRIP	WATER DELIVERY EQUIPMENT, REFER TO ZONE CHART SHEET XXX FOR MODEL NUMBERS, BODY TYPE, AND NOZZLE.	

REFER TO SHEET L721 FOR COMPLETE IRRIGATION ZONE SCHEDULE

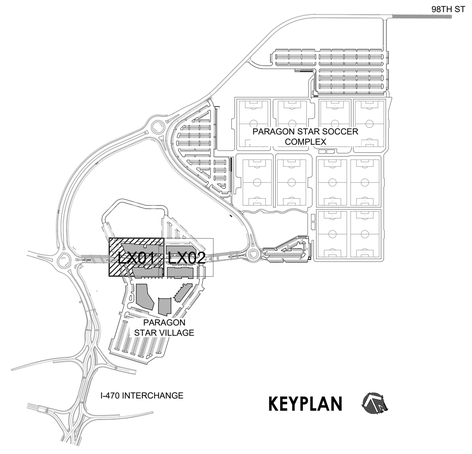
IRRIGATION ZONE TAG



IRRIGATION NOTES

1. THIS PLAN ILLUSTRATES THE SCHEMATIC SCOPE OF WORK FOR THE IRRIGATION SYSTEM FOR THE VILLAGE AT PARAGON STAR AND IS INTENDED TO BE USED FOR PRELIMINARY PRICING. REFER TO **SECTION 328400 - IRRIGATION SYSTEM** FOR THE DETAILED SCOPE OF WORK, RESPONSIBILITIES, PRODUCTS AND EXECUTION OF WORK.
2. CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES BY CONTACTING ALL OF THE RESPECTIVE UTILITY COMPANIES AND/ OR THE LOCAL "ONE-CALL"/"CALL-BEFORE-YOU-DIG" SYSTEM AND BY EXCAVATING TEST PITS IF NECESSARY.
3. VERIFY ALL SITE CONDITIONS AND DIMENSIONS SHOWN ON THE PLAN PRIOR TO COMMENCEMENT OF WORK. NOTIFY OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES OR IRREGULAR CONDITIONS ENCOUNTERED DURING CONSTRUCTION.
4. SYSTEM IS DESIGNED ASSUMING 110 GPM AT 70 PSI TO BE PROVIDED VIA FUTURE BUILDING. CONTRACTOR WILL PROVIDE A TEMPORARY POINT OF CONNECTION INCLUDING BACKFLOW AND SUB-METER TO SUPPLY THIS PHASE OF WORK. SECURE PERMIT AS REQUIRED FOR TEMPORARY POINT OF CONNECTION (P.O.C.) TO DOMESTIC WATER.
5. IRRIGATION DESIGNS ARE DIAGRAMMATIC; ALL PIPING, VALVES, EQUIPMENT, ETC. SHOWN IS FOR DESIGN INTENT OR GUIDELINE ONLY AND SHALL BE INSTALLED IN THE FIELD AREAS IN A MANNER TO CONFORM TO THE VARIOUS DETAILS AND APPROVED SHOP DRAWINGS AS DIRECTED.
6. RAIN SENSOR TO BE INCLUDED IN FUTURE PHASE.
7. 120-VOLT ELECTRICAL POWER SERVICE PROVIDED BY OTHERS; REFER TO ELECTRICAL.
8. INSTALL TRACER WIRE (#14 WITH PVC JACKET) ALONG ALL MAINLINE WHERE CONTROL WIRES OR TWO-WIRE PATH IS NOT PRESENT.

IMPORTANT:
WINTERIZATION WATER BLOW-OUT PROCESS WARNING -- THE IRRIGATION SYSTEM IS DESIGNED TO BE COMPLETELY DRAINED BY THE USE OF AN AIR COMPRESSOR TO PROTECT PIPES FROM BURSTING PRIOR TO FREEZING TEMPERATURES.



KEYPLAN

L701
IRRIGATION PLAN

STATE OF MISSOURI
ROBERT BUSH HEAD
NUMBER
LA-2008003007
LANDSCAPE ARCHITECT
11-04-20

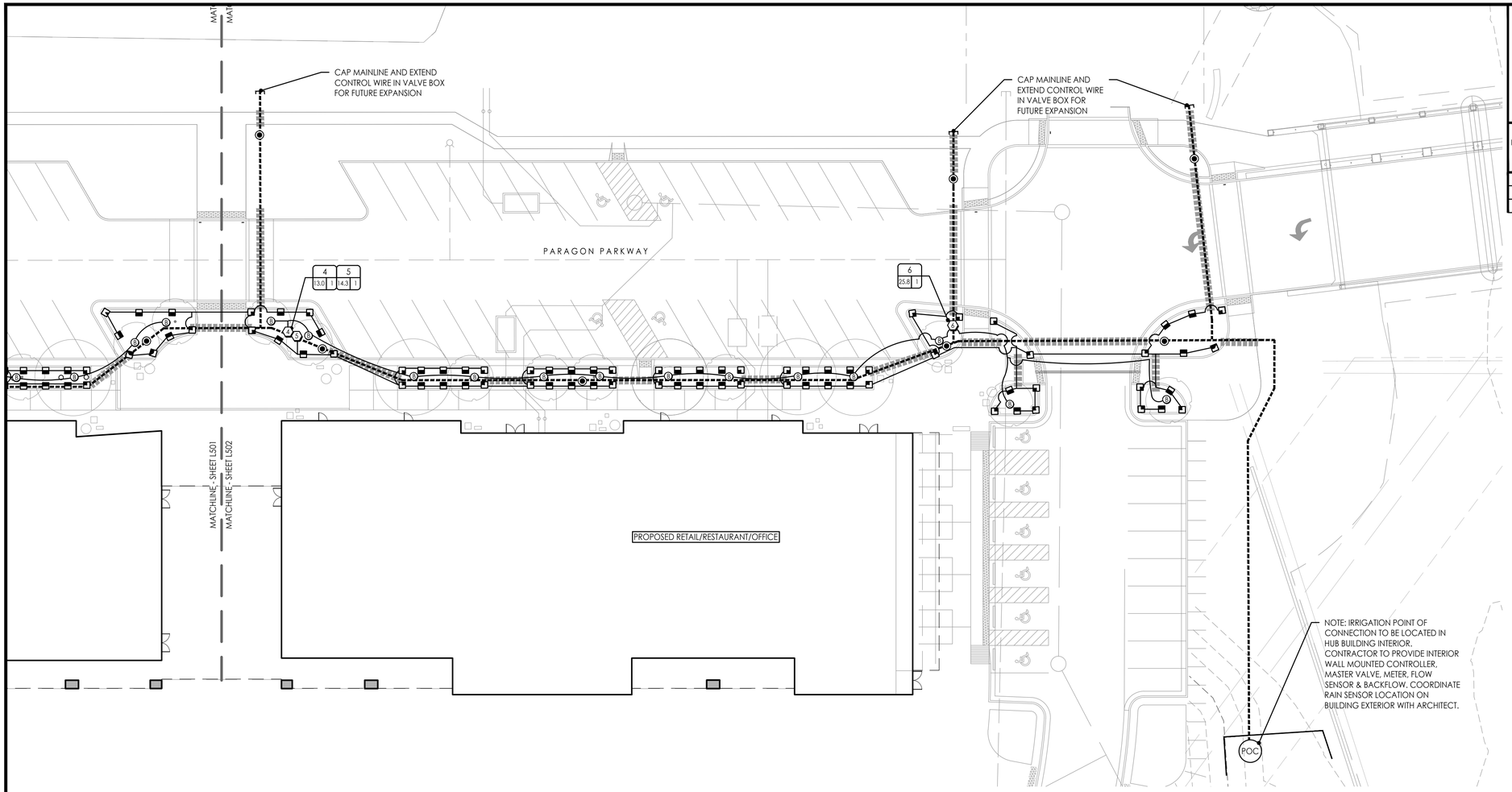
LAND3 Studio - Landscape Architect
MO LA Corp# 2008001860

GBA architects engineers
9801 Renner Boulevard
Lenexa, Kansas 66219
913.492.0400
www.gbateam.com

DATE:	11-4-2020
DESIGN BY:	
DRAWN BY:	RWB/EDD
PROJECT NO.:	12720
SHEET NO.:	62
TOTAL SHEETS	67

Street and Storm Sewer Plans
Paragon Parkway
Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing		



20 10 0 20 60

SCALE: 1"=20'

1 IRRIGATION PLAN - VILLAGE PARKWAY EAST

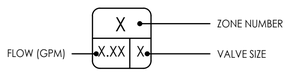
Scale: 1"= 20'-0"

IRRIGATION LEGEND

SYMBOL	DESCRIPTION	DETAIL
	2" PVC MAINLINE (SEE PLAN FOR SIZE)	RE: SECTION 328400 / RE: DETAIL 1/L720
	LATERAL LINE (1" UNLESS OTHERWISE NOTED)	RE: SECTION 328400 / RE: DETAIL 1/L720
	PVC PIPE SLEEVE (6" UNLESS OTHERWISE NOTED)	RE: DETAIL 2/L720
C	CONTROLLER	RE: DETAIL 3/L721
R	RAIN/FREEZE SENSOR	RE: DETAIL 4/L721
MV	MASTER VALVE	RE: DETAIL 6/L720
	BACKFLOW PREVENTER (N.I.C.)	RE: CIVIL DWGS
M	WATER METER (N.I.C.)	RE: CIVIL DWGS
XX	REMOTE CONTROL VALVE	RE: DETAIL 5/L720
B	ROOT WATERING SYSTEM	RE: DETAIL 10/L720
	ISOLATION VALVE	RE: DETAIL 3/L720
	QUICK COUPLER	RE: DETAIL 4/L720
FULL ARC 180 ARC 90 ARC 270 ARC	WATER DELIEVERY EQUIPMENT. REFER TO ZONE CHART SHEET XXX FOR MODEL NUMBERS, BODY TYPE, AND NOZZLE.	
FULL STRIP HALF STRIP	WATER DELIVERY EQUIPMENT. REFER TO ZONE CHART SHEET XXX FOR MODEL NUMBERS, BODY TYPE, AND NOZZLE.	

REFER TO SHEET L721 FOR COMPLETE IRRIGATION ZONE SCHEDULE

IRRIGATION ZONE TAG



IRRIGATION NOTES

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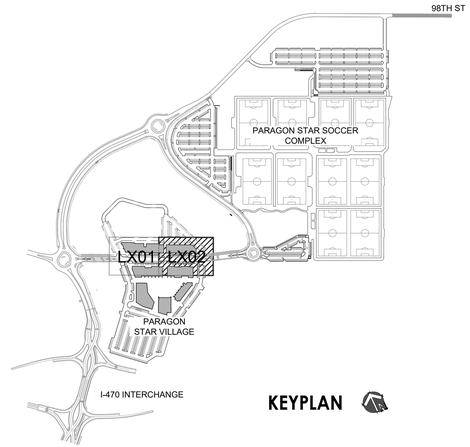


KEYPLAN

STATE OF MISSOURI
ROBERT RUSSELL HEAD
NUMBER
LA-2008003007
LANDSCAPE ARCHITECT
11-04-20

LAND3 Studio - Landscape Architect
MO LA Corp# 2008001860

GBA
architects
engineers
9801 Renner Boulevard
Lenexa, Kansas 66219
913.492.0400
www.gbateam.com

DATE:	11-4-2020
DESIGN BY:	
DRAWN BY:	RWB/EDD
PROJECT NO.:	12720
SHEET NO.:	63
TOTAL SHEETS	67

Street and Storm Sewer Plans

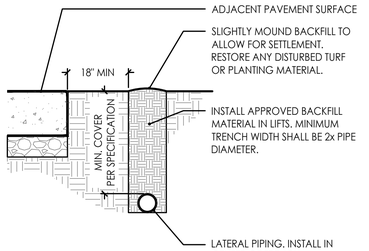
Paragon Parkway

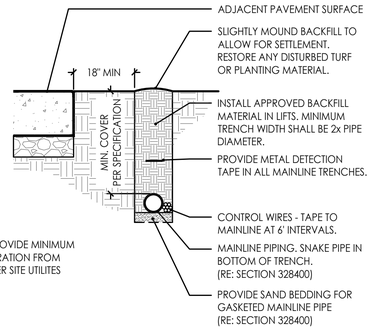
Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing		

L702

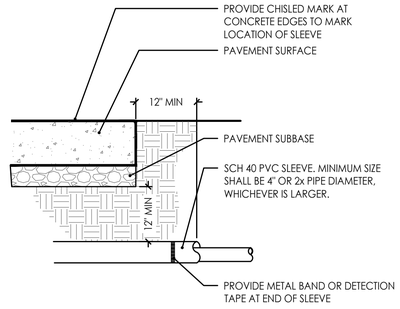
IRRIGATION PLAN



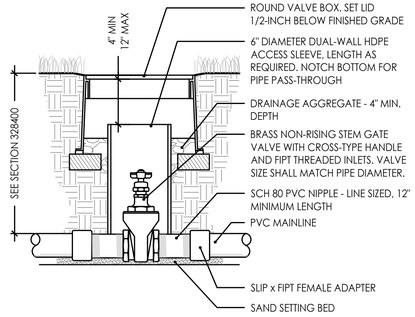


NOTE: PROVIDE MINIMUM 18" SEPARATION FROM ALL OTHER SITE UTILITES

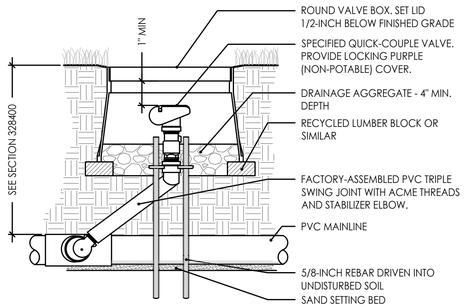
1 PIPE TRENCHING
Scale: N.T.S.



2 PIPE SLEEVE
Scale: N.T.S.

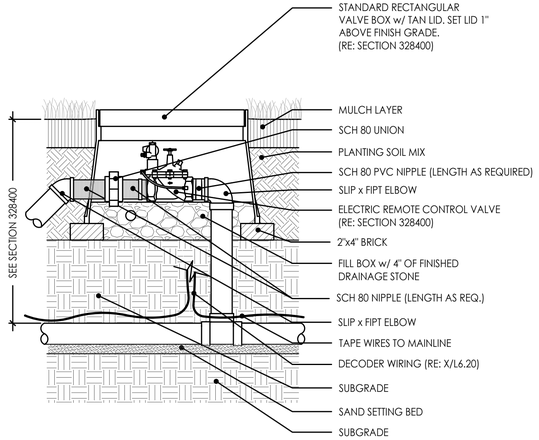


3 ISOLATION VALVE
Scale: N.T.S.

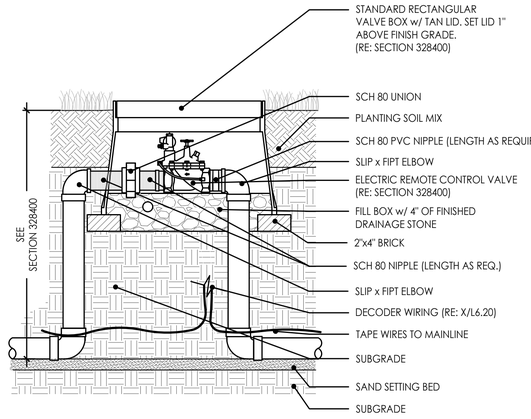


NOTES
1. ACME O-RING SEALED THREADS ARE TO BE FINGER TIGHTENED AND BACKED OFF ONE FULL ROTATION BEFORE INSTALLATION.
2. THE SWING JOINT ARM IS TO BE INSTALLED AT AN ANGLE BETWEEN 30° AND 45° TO THE MAINLINE
3. TEFLON TAPE ALL METAL THREADS.

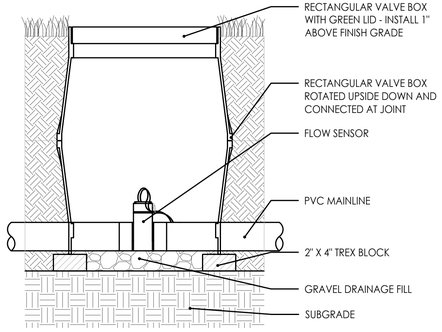
4 QUICK COUPLE VALVE
Scale: N.T.S.



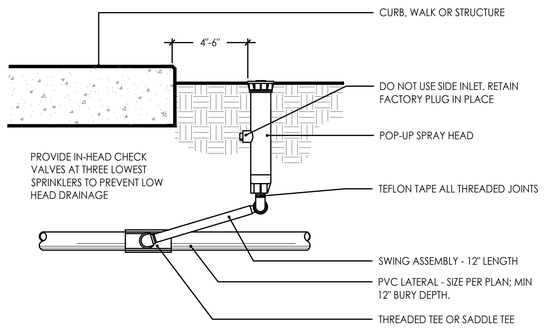
5 REMOTE CONTROL VALVE
Scale: N.T.S.



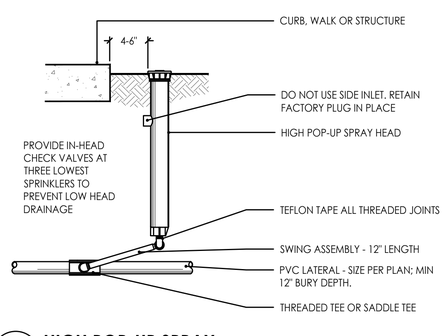
6 MASTER VALVE
Scale: N.T.S.



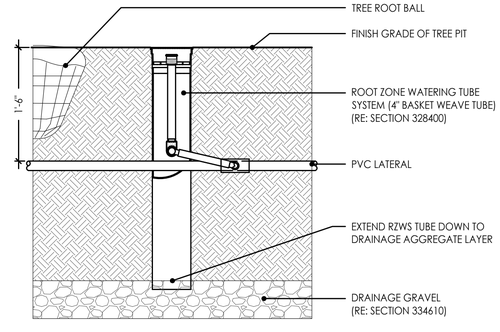
7 FLOW SENSOR
Scale: N.T.S.



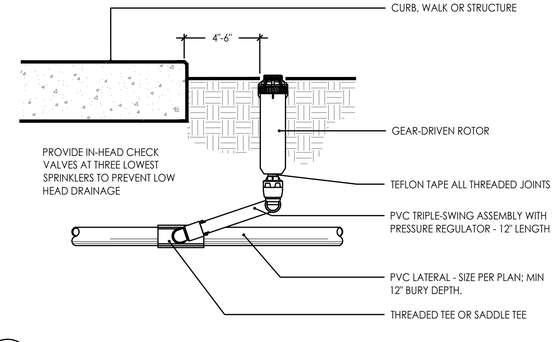
8 POP-UP SPRAY HEAD
Scale: N.T.S.



9 HIGH POP-UP SPRAY
Scale: N.T.S.



10 ROOT WATERING SYSTEM
Scale: N.T.S.



11 ROTOR HEAD
Scale: N.T.S.

L720
IRRIGATION DETAILS

GBA architects engineers
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DATE:	11-4-2020
DESIGN BY:	
DRAWN BY:	RWB/EDD
PROJECT NO.:	12720
SHEET NO.	64
TOTAL SHEETS	67

STATE OF MISSOURI — BROOKS JUSTIN HEAD — NUMBER LA-2009003007 — LANDSCAPE ARCHITECT — 11-04-20

LAND3 Studio - Landscape Architect
MO LA Corp# 2008001860

Street and Storm Sewer Plans
Paragon Parkway
Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
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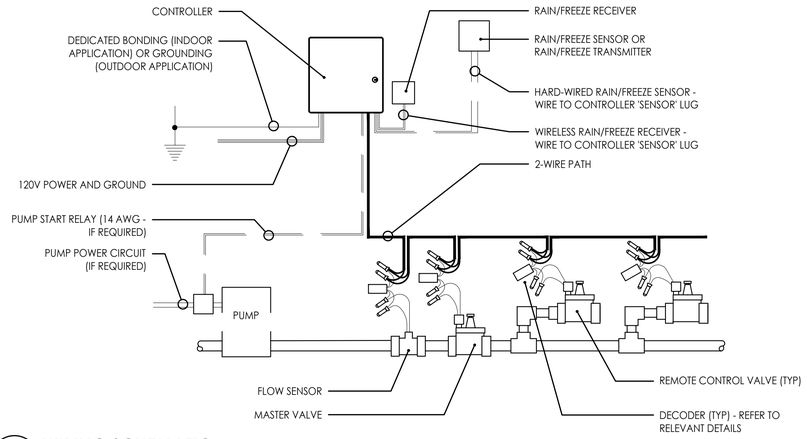
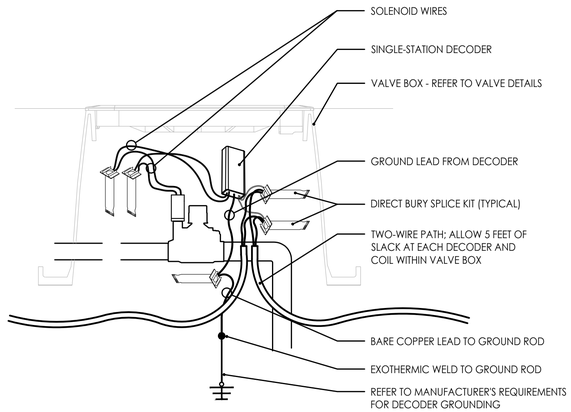


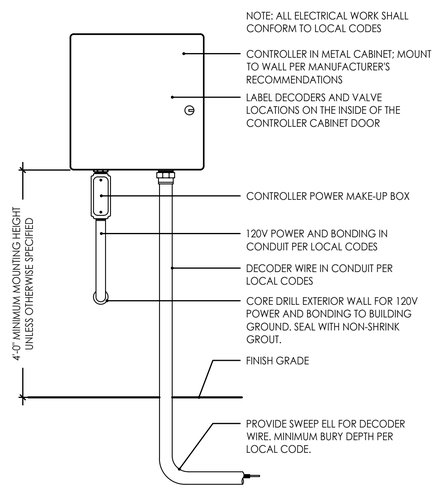
1 WIRING SCHEMATIC

Scale: N.T.S.



2 DECODER

Scale: N.T.S.

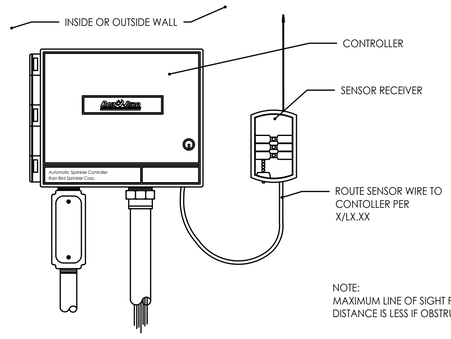


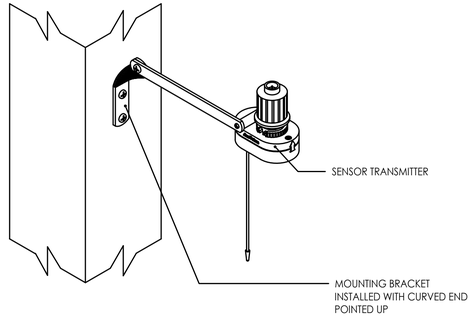
3 CONTROLLER

Scale: N.T.S.

IRRIGATION SCHEDULE

ZONE	ZONE TYPE	HEAD / LINE INFORMATION							FLOW (GPM)	OPERATING PRESSURE (PSI)	VALVE SIZE
		360°	270°	180°	90°	SST	RCS/LCS	CST			
1	TURF ROTOR	HEAD: RAINBIRD 5012/ NOZZLE: RAINBIRD RAIN CURTAIN							9.0	35	1"
		0	0	4	1	0	0	0			
2	BED SPRAY	HEAD: RAINBIRD 1812/ NOZZLE: RAINBIRD MPR							34.0	30	1"
		0	0	24	23	0	0	0			
3	TREE DRIP	TREE DRIP: (16) RWS-B-1404; ROOT ZONE WATERING @ 1.0 gpm							16.0	30	1"
4	TREE DRIP	TREE DRIP: (13) RWS-B-1404; ROOT ZONE WATERING @ 1.0 gpm							13.0	30	1"
5	BED SPRAY	HEAD: RAINBIRD 1812/ NOZZLE: RAINBIRD MPR							14.3	30	1"
		0	0	20	15	0	0	0			
6	BED SPRAY	HEAD: RAINBIRD 1812/ NOZZLE: RAINBIRD MPR							25.8	30	1"
		0	0	20	21	0	0	0			





NOTE:
MAXIMUM LINE OF SIGHT FROM RAIN SENSOR TO RECEIVER IS 500 FT.; DISTANCE IS LESS IF OBSTRUCTIONS EXIST.

4 RAIN SENSOR

Scale: N.T.S.

STATE OF MISSOURI
ROBERT JUSTIN HEAD
NUMBER
LA-2008003007
LANDSCAPE ARCHITECT
11-04-20

LAND3 Studio - Landscape Architect
MO LA Corp# 2008001860

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Lenexa, Kansas 66219
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DATE:	11-4-2020
DESIGN BY:	
DRAWN BY:	RWB/EDD
PROJECT NO.:	12720
SHEET NO.:	65
TOTAL SHEETS:	67

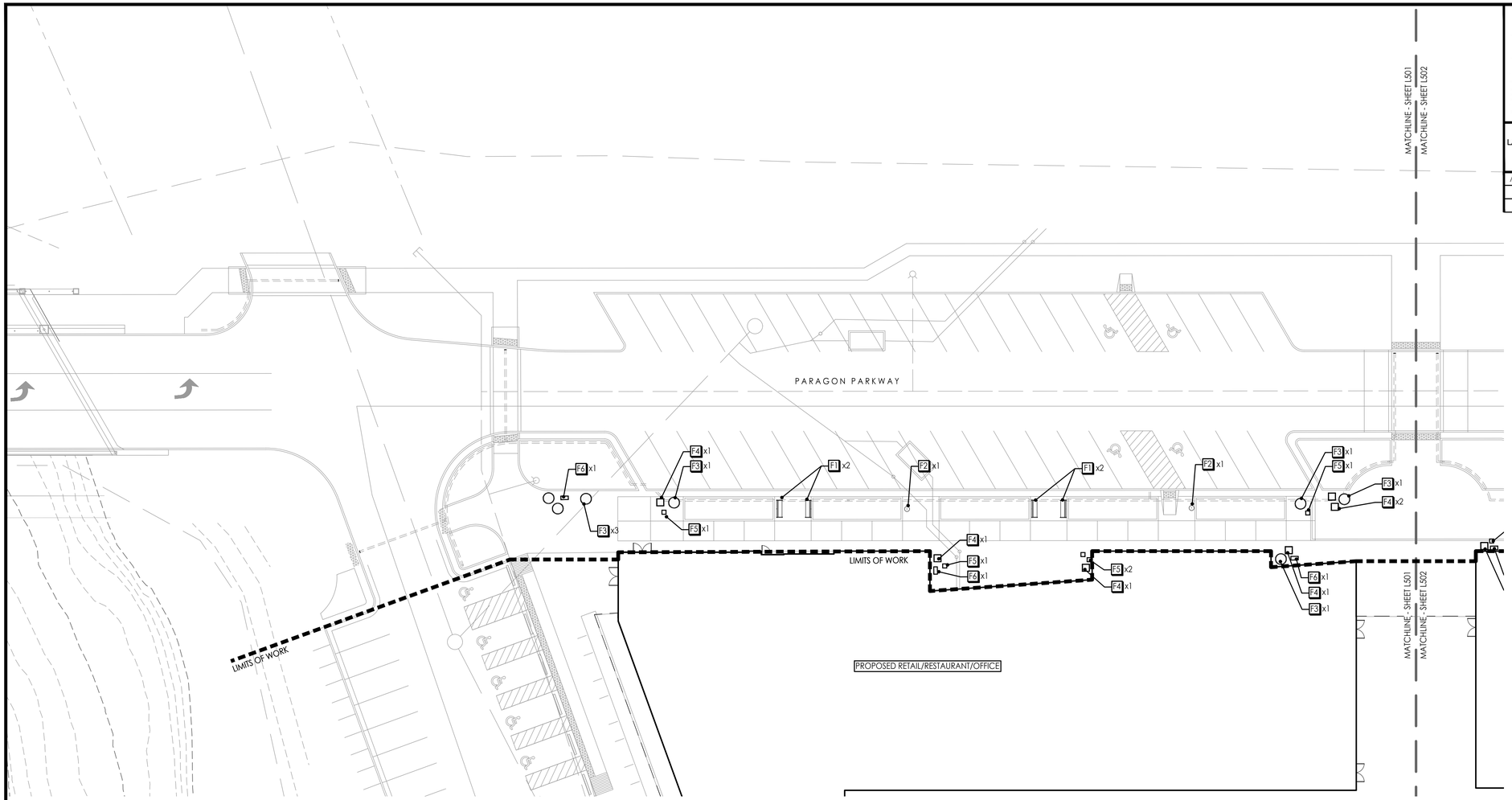
Street and Storm Sewer Plans

Paragon Parkway

Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing		

L721
IRRIGATION DETAILS



1 SITE FURNISHINGS PLAN - VILLAGE PARKWAY WEST

Scale: 1"= 20'-0"

20 10 0 20 60

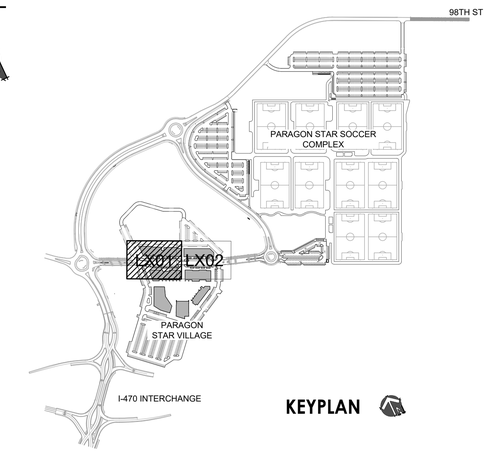
SCALE: 1"=20'

SITE FURNISHINGS NOTES

1. THIS PLAN PROVIDES LAYOUT & QUANTITY OF ALL SITE FURNISHINGS TO BE PROVIDED BY THE LANDSCAPE CONTRACTOR. REFER TO **SECTION 323300 - SITE FURNISHINGS** FOR COMPLETE SCOPE OF WORK, RESPONSIBILITIES, PRODUCTS AND EXECUTION OF WORK.
2. CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES BY CONTACTING ALL OF THE RESPECTIVE UTILITY COMPANIES AND/ OR THE LOCAL "ONE-CALL"/"CALL-BEFORE-YOU-DIG" SYSTEM AND BY EXCAVATING TEST PITS IF NECESSARY.
3. LANDSCAPE ARCHITECT TO SELECT FINAL LOCATIONS OF ALL SITE FURNISHINGS. CONTRACTOR TO NOTIFY LANDSCAPE ARCHITECT AND OWNERS REP PRIOR TO FINAL PLACEMENT OF ALL FURNISHINGS.

SITE FURNISHINGS SCHEDULE

SYM.	DESCRIPTION	DETAIL	SPECIFICATION
F1	BENCH		SECTION 323300
F2	WASTE RECEPTACLE		SECTION 323300
F3	42" DIA. ROUND PLANTER POT		SECTION 323300
F4	30" DIA. SQUARE PLANTER POT		SECTION 323300
F5	24" DIA. SQUARE PLANTER POT		SECTION 323300
F6	36" x 24" RECTANGLE PLANTER POT		SECTION 323300
F7	60" x 24" RECTANGLE PLANTER POT		SECTION 323300



KEYPLAN

STATE OF MISSOURI
ROBERT RUSSELL HEAD
NUMBER
LA-2008003007
LANDSCAPE ARCHITECT
11-04-20

LAND3 Studio - Landscape Architect
MO LA Corp# 2008001860

GBA
architects
engineers
9801 Renner Boulevard
Lenexa, Kansas 66219
913.492.0400
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DATE:	11-4-2020
DESIGN BY:	
DRAWN BY:	RWB/EDD
PROJECT NO.:	12720
SHEET NO.:	66
TOTAL SHEETS	67

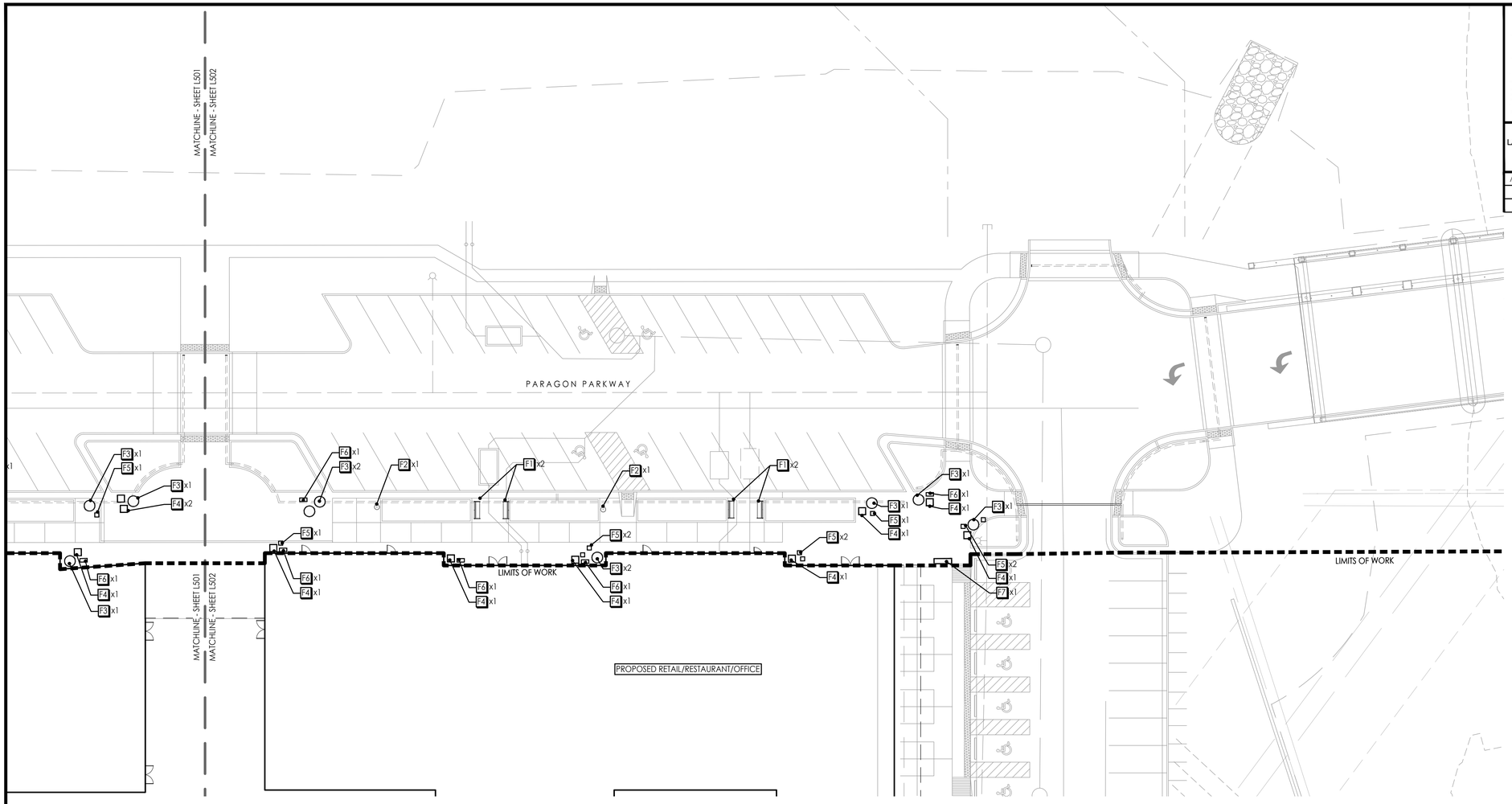
Street and Storm Sewer Plans

Paragon Parkway

Lee's Summit, Missouri

NO.	DATE	REVISIONS	BY	APPROVED
	10/16/20	Issued for Pricing		

L801
SITE FURNISHINGS PLAN



1 **SITE FURNISHINGS PLAN - VILLAGE PARKWAY EAST**
Scale: 1"= 20'-0"

20 10 0 20 60
SCALE: 1"=20'

SITE FURNISHINGS NOTES

1. THIS PLAN PROVIDES LAYOUT & QUANTITY OF ALL SITE FURNISHINGS TO BE PROVIDED BY THE LANDSCAPE CONTRACTOR. REFER TO **SECTION 323300 - SITE FURNISHINGS** FOR COMPLETE SCOPE OF WORK, RESPONSIBILITIES, PRODUCTS AND EXECUTION OF WORK.
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SITE FURNISHINGS SCHEDULE

SYM.	DESCRIPTION	DETAIL	SPECIFICATION
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F5	24" DIA. SQUARE PLANTER POT		SECTION 323300
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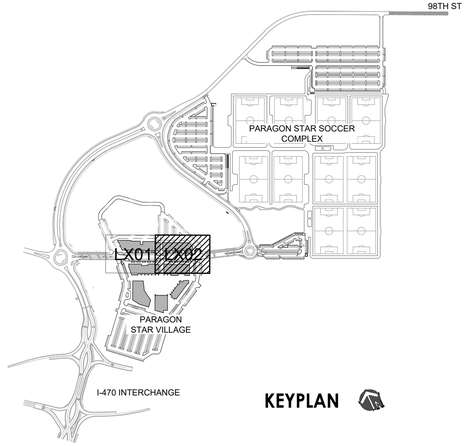
F7	60" x 24" RECTANGLE PLANTER POT		SECTION 323300



KEYPLAN

STATE OF MISSOURI
ROBERT BUSHEHEAD
HOOPER
LA-2008003007
LANDSCAPE ARCHITECT
11-04-20

LAND3 Studio - Landscape Architect
MO LA Corp# 2008001860

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DATE:	11-4-2020
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DRAWN BY:	RWB/EDD
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Street and Storm Sewer Plans
Paragon Parkway
Lee's Summit, Missouri

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L802
SITE FURNISHINGS PLAN