

December 11, 2020

Shannon McGuire, Planner
Lee's Summit Development Services
220 SE Green Street
Lee's Summit, MO 64063

Permit Number: PRCOM20203513
Project Name: LSR7 – LSHS – 2020 Athletic Complex Improvements
Project Address: 400 SE Blue Pkwy, Lee's Summit, MO 64063
County: Jackson

Attachments 20201207 LSHS FDP Response Letter, 20201207LSHS Athletics Stormwater Compliance Letter, LSHS Athletics – EPEOCC 20201207

The following letter is in response to the plan review comments for the project listed above. Responses are indicated in bold following each numbered comment.

Required Corrections

Fire Review

1. All issues pertaining to life safety and property protection from the hazards of fire, explosion or dangerous conditions in new and existing buildings, structures and premises, and to the safety to fire fighters and emergency responders during emergency operations, shall be in accordance with the 2018 International Fire Code.

Acknowledged. Refer to sheet H-G101 where 2018 International Fire Code is listed as an applicable code.

Engineering Review

1. It appears the "Master Drainage Plan" dated Nov. 20, 2020 (hereinafter referred to as "the stormwater report") was developed not only to cover work undertaken by this application, but by work covered by another application which was only recently received within the past week (i.e., the renovation project covered by a separate Final Development Plan application). Will the work covered by this particular application result in increased impervious area, and if so, what is the net increase in terms of gross square footage and percentage of existing impervious area? In order to move forward with the application, these questions need to be addressed. This will have a bearing

on the applicability of stormwater detention to this portion of the overall project.

Response per civil engineer, see attached 20201207 LSHS FDP Response Letter, 20201207LSHS Athletics Stormwater Compliance Letter, LSHS Athletics – EPEOCC 20201207.

2. The waiver request appears to request an exception to the design criteria for this particular project, along with other portions of the project covered by a separate Final Development Plan which was recently received within the past week. It is possible that no significant increase in impervious area will occur for this portion of the project (i.e., the athletic field portion). If so, then a waiver would not be required. It should be noted that staff will not support such a waiver, since it would appear detention could be constructed meeting the Comprehensive Control Strategy, and no justification was provided why it could not be constructed to this standard.

Response per civil engineer, see attached 20201207 LSHS FDP Response Letter, 20201207LSHS Athletics Stormwater Compliance Letter, LSHS Athletics – EPEOCC 20201207.

3. If it is determined that detention is required for this portion of the project (i.e., the athletic field upgrades), the plans covering the renovation and detention improvements must be approved prior to approval of these plans. This is due to the fact that the detention basin would need to be constructed prior to any other activities on the site, with the exception of erosion and sediment control.

Response per civil engineer, see attached 20201207 LSHS FDP Response Letter, 20201207LSHS Athletics Stormwater Compliance Letter, LSHS Athletics – EPEOCC 20201207.

4. If it is determined that detention is not required for this particular portion of the project, then these plans could be approved prior to approval of the renovation plans. These renovation plans were received last week, and are currently under review.

Response per civil engineer, see attached 20201207 LSHS FDP Response Letter, 20201207LSHS Athletics Stormwater Compliance Letter, LSHS Athletics – EPEOCC 20201207.

Sincerely,

Tonie Barnett
Gould Evans
4200 Pennsylvania Ave,
Kansas City, MO 64111



KAW VALLEY ENGINEERING, INC.

Office: 913.894.5150
Fax: 913.894.5977
Web: www.kveng.com
Address: 14700 West 114th Terrace
Lenexa, KS 66215

December 7, 2020

C20D0496

City of Lee's Summit
Development Services
220 SE Green Street
Lee's Summit, Missouri 64063

**RE: COMMERCIAL FINAL DEVELOPMENT PLAN
LSHS 2020 ATHLETIC FIELD IMPROVEMENTS
LEE'S SUMMIT, MISSOURI**

To Whom it May Concern:

Kaw Valley Engineering, Inc. (KVE) has received comments from City of Lee's Summit for the above referenced project on December 7, 2020 and issues the following response.

ENGINEERING REVIEW

1. It appears the "Master Drainage Plan" dated November 20, 2020 (hereinafter referred to as "the stormwater report") was developed not only to cover work undertaken by this application, but work covered by another application which was only received within the past week (i.e., the renovation project covered by a separate Final Development Plan application). Will the work covered by this particular application result in increased impervious area, and if so, what is the net increase in terms of gross square footage and percentage of existing impervious area? In order to move forward with the application, these questions need to be addressed. This will have a bearing on the applicability of stormwater detention on this portion of the project. **The proposed Athletics project will impact 52,650 SF of the LSHS Campus and will generate a net increase of 280 SF in impervious coverage or 0.53% as sampled against the 52,650 SF project area. Refer to the attached storm water management memo for the LSHS Athletics project.**
2. The waiver request appears to request an exception to the design criteria for this particular project, along with other portions of the project covered by a separate Final Development Plan which was recently received within the past week. It is possible that no significant increase in impervious area will occur for this portion of the project (i.e., the athletic field portion). If so then a waiver would not be required. It should be noted that staff will not support such a waiver, since it would appear detention could be constructed meeting the comprehensive Control Strategy, and no justification was provided why it could not be constructed to this standard.
 - a. **Refer to response to comment 1 for the breakdown of increase in impervious coverage associated with the Athletics Project.**

- b. **The request for the waiver to detention for the Athletics portion of the project is rescinded as it is my understanding that small increases in impervious coverage (i.e., less than 5,000 SF may be permitted without implementing additional mitigation).**
- c. **The intent of the Stormwater Report was to document the proposed change in impervious coverage for all impacted portions of the LSHS campus in one document for ease of permitting.**
- d. **The waiver request is applicable to the LSHS Addition and Renovation project being reviewed separately. Regarding staff's support of the waiver and proposed mitigation strategies, the improved nature of the site does not lend itself to implementing a comprehensive detention control strategy for the 16.58 acres project area with 12.19 acres or 73.5% of existing impervious coverage and 12.52 acres or 75.5% of proposed impervious coverage due to the following reasons:**
 - i. **This portion of the developed campus is not currently mitigated with a detention basin. Existing storm sewer infrastructure sizes and routing is being maintained to the maximum extents practical.**
 - ii. **Existing/Proposed storm sewer infrastructure is routed through an extensively developed portion of campus with limited land not encumbered by physical site features above and below grade.**
 - iii. **There are multiple building roof drains tied directly to the onsite private storm system that should not be surcharged for extended periods.**
 - iv. **The onsite drainage system ties directly into the existing public storm sewer with the exception of the northwest parking lot.**
 - v. **The runoff generated by this campus is collected and conveyed in an extensive private storm sewer system that is tied directly into the existing public storm system.**
 - vi. **Providing onsite comprehensive detention control strategies would require interrupting the main storm line contributing drainage areas or providing point mitigation strategies at multiple upstream inlet points. There are not enough available locations to logistically and cost effectively meet the level of mitigation stipulated in the comprehensive control strategies without removing existing impervious coverage.**

At this time, it is the opinion of Kaw Valley Engineering, Inc. that it would be prudent to schedule a meeting with the City of Lee's Summit to discuss options for providing storm water mitigation for the full build out of this campus currently proposed in the FDP submittals as well as the future relocation of Blue Parkway proposed by the City of Lee's Summit.

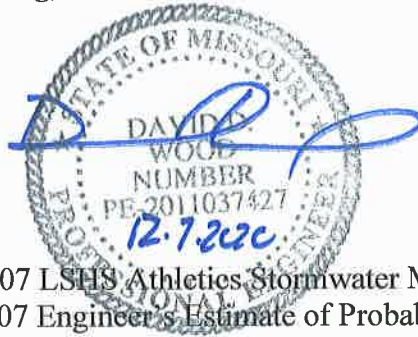
- 3. **If it is determined that detention is required for this portion of the project (i.e. the athletic field upgrades), the plans covering the renovation and detention improvements must be approved prior to the approval of these plans. This is due to the fact that the detention basin would need to be constructed prior to any other activities on the site, with exception of erosion and sediment control. **Noted. See response to comment 1.****

4. If it is determined that detention is not required for this particular portion of the project, then these plans could be approved prior to the approval of the renovation plans. The renovation plans were received last week and are currently under review. **Noted. See response to comment 1.**

If you have any questions or need additional information regarding the proposed project, don't hesitate to contact me at (913) 894-5150 or at wood@kveng.com.

Respectfully submitted,
Kaw Valley Engineering, Inc.

David D. Wood, P.E.
Project Manager



Attachments: 20201207 LSHS Athletics Stormwater Management Memo
20201207 Engineer's Estimate of Probable Construction Cost

cc: Tonie Barnett, Gould Evans

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Address: 14700 West 114th Terrace
Lenexa, KS 66215

December 7, 2020

C20D0496

Mr. Kyle Gorrell
Lee's Summit School District
302 SE Transport Road
Lee's Summit, Missouri 64081

**RE: STORM WATER MANGEMENT MEMO
LEE'S SUMMIT HIGH SCHOOL ATHLETICS PROJECT
ADDENDUM TO LSHS CAMPUS DRAINAGE STUDY
LEE'S SUMMIT, MISSOURI**

Dear Mr. Gorrell:

Kaw Valley Engineering, Inc. has completed a review of the stormwater management implications associated with the construction of the Athletic Improvements at the Lee's Summit (LSHS) Stadium in Lee's Summit, Missouri.

As part of this project, KVE is proposing minimal changes to the existing drainage system on the west side of the stadium in order to route infrastructure around the proposed bleacher foundation system. Building roof drains that cannot easily be connected to the existing or modified storm sewer system will be collected in downspout collectors and piped to the adjacent lawn areas. Each roof drain discharge pipe is proposed to be capped with a pop-up emitter to reduce the potential for erosion. The pop-up emitter will be set on an open bottom drainage basin installed on an aggregate base to permit excess water in the system to drain into the surrounding soil. The overall drainage pattern around the stadium is not being altered by this project.

The City of Lee's Summit, Missouri has adopted a storm water management design criterion titled Section 5600 (Storm Drainage Systems and Facilities) which was used for stormwater planning and design. APWA 5600 lists exceptions to general requirements and applicability associated with Development in section 5601.3. The intent of these exceptions is to not require implementation of extensive storm water management systems on low impact and small-scale development projects.

The proposed LSHS Athletics project will impact approximately 52,650 SF of the property on both the west and east sides of the stadium. The change in landcover associated with the LSHS Athletics Project is documented in Table 1.

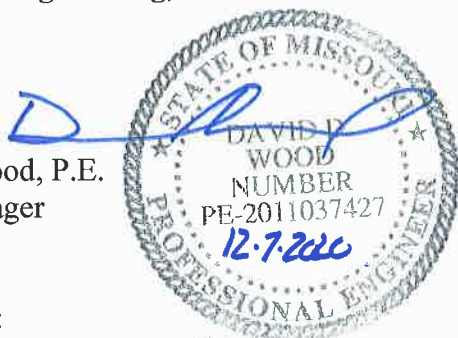
Table 1 - Change in Land Cover LSHS Athletics Project				
Description	Project Area (Sq. Ft)	Area (ac)	Impervious Area (SF)	% Impervious
Existing	52,650	1.21	44,940	85.36%
Proposed			45,220	85.89%
Difference			280	0.53%

A net increase of approximately 280 SF or .53% in impervious coverage as sampled across the 52,650 SF defined project area is expected at project completion. Due to the disconnected and isolated nature of the proposed impervious coverage increases and the project being located upstream of an existing detention basin to the northwest of the stadium, KVE will request that the City of Lee's Summit permits the proposed improvements without addressing the nominal increase in impervious surface associated with this project.

If you have any questions or require additional information, please do not hesitate to contact me at (913) 894-5150.

Respectfully submitted,
Kaw Valley Engineering, Inc.

David D. Wood, P.E.
 Project Manager



Attachments:
 Site Plan, Demolition Plan, Grading Plan, Drainage Plans

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LEE'S SUMMIT HIGH SCHOOL
SITE PLAN
400 SE BLUE PARKWAY, LEE'S SUMMIT, MO 64063
SECTION 8 - TOWNSHIP 47 N - RANGE 31 W

PREPARED FOR:
LEE'S SUMMIT SCHOOL DISTRICT
302 SE TRANSPORT RD.
LEE'S SUMMIT, MO 64081
PHONE: (816) 986-2421
CONTACT: KYLE GORRELL
EMAIL: kyle.gorrell@sr7.net

PREPARED BY:
KAW VALLEY ENGINEERING, INC.
14700 W 114TH TERR.
LENEXA, KANSAS 66215
PHONE: (913) 894-5150
CONTACT: DAVID WOOD
EMAIL: wood@kveeng.com

LEGEND:

	AIR CONDITIONER		DUCTILE IRON PIPE
	WALL MOUNTED ELECTRICAL OUTLET		HIGH DENSITY POLYETHYLENE
	UNDERGROUND GAS		WALL MOUNTED LIGHT
	GAS METER		GAS VALVE
	CONTROL POINT		GAS RISER
	BENCHMARK		GAS LINE SIGN
	GATE POST		DOOR ELEVATION AT THRESHOLD
	CHAIN LINK FENCE		FINISH FLOOR ELEVATION
	WOOD FENCE		BUILDING HEIGHT/ELEVATION
	BOLLARD		BACK TO BACK OF CURB MEASUREMENT
	STREET/TRAFFIC SIGN		EDGE TO EDGE OF ASPHALT
	PAINTED DIRECTIONAL ARROW		WATER LINE
	TURN LANE DIRECTION		WATER METER GATE VALVE
	HANDICAP SYMBOL		FIRE HYDRANT
	PARKING STALL COUNT		SPRINKLER CONTROL BOX
	HANDICAP SIGN		WATER MANHOLE
	HRPMP HANDICAP RAMP		SIAMESE FIRE CONNECTOR
	WHEEL STOP		CANOPY SUPPORT
	UNDERGROUND FIBER OPTIC CABLE		MAIL BOX
	UNDERGROUND FIBER OPTIC (FROM RECORDS)		CONCRETE JOINT/CUT LINE
	TELEPHONE PEDESTAL		BUSH
	SANITARY SEWER MANHOLE		DECIDUOUS TREE
	STORM SEWER MANHOLE		TRASH ENCLOSURE
	AREA INLET		LANDSCAPING AREA
	CURB INLET		CONCRETE
	SANITARY SEWER CLEAN OUT		LOWEST WIRE HEIGHT
	DOWN SPOUT		FLAG POLE
	FLOOD DRAIN		ELECTRIC METER
	FLARED END SECTION		UNDERGROUND ELECTRIC PEDESTAL
	SANITARY SEWER LINE		SPEAKER BOX
	STORM SEWER LINE		BREAKER BOX
	CORRUGATED METAL PIPE		UNDERGROUND GAS PER RECORD
	REINFORCED CONCRETE PIPE		SANITARY SEWER LINE PER RECORD
	VITRIFIED CLAY PIPE		STORM SEWER LINE PER RECORD
	UNDERGROUND ELECTRIC		OVERLAY
	OVERHEAD UTILITY LINE (of LINES)		GRAVEL SURFACE (ESC-01/043)
	PULL BOX		CONCRETE SIDEWALK (055)
	LIGHT POLE		CONCRETE CURB AND GUTTER
	UTILITY POLE		CONCRETE CURB AND GUTTER WITH REVERSE FLOW
	UTILITY POLE W/ LIGHT		LANDING
	UTILITY POLE W/ TRANSFORMER		RAMP
	GUY ANCHOR		TRANSITION
	WATER LINE PER RECORD		
	UNDERGROUND ELECTRIC PER RECORD		
	CONFERSUS TREE		

MARKING MATERIALS: APWA 2306.7G
PARKING STALLS STRIPING AND SYMBOLS
ALL SURFACES - TRAFFIC MARKING PAINT, COLOR AS
INDICATED.

PAVEMENT MARKING SPECIFICATIONS:

PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH
THE LATEST EDITION OF THE CITY OF KANSAS CITY, MISSOURI
CHAPTER OF THE AMERICAN PUBLIC WORKS ASSOCIATION
SPECIFICATIONS SECTION 2306 AS ADOPTED AND AMENDED BY
THE CITY OF LEE'S SUMMIT.

STORM WATER MANAGEMENT:

STORM WATER MANAGEMENT IS PROPOSED AS PART OF THE
OVERALL LEE'S SUMMIT HIGH SCHOOL PROJECT AND COMPLIES
WITH THE KC METROPOLITAN CHAPTER OF APWA DESIGN CRITERIA
SECTION 5600. PROPOSED STORM WATER MANAGEMENT SYSTEM
WILL MITIGATE INCREASES IN RUNOFF FOR THE STORM EVENTS
ANALYZED TO A RATE AT OR LESS THAN THE EXISTING
CONDITIONS.

UNDERGROUND UTILITY STATEMENT:

THE UNDERGROUND UTILITIES SHOWN HEREON ARE DEPICTED FROM
FIELD SURVEY INFORMATION OF ONE-CALL LOCATED UTILITIES
AND/OR THE SCALING AND PLOTTING OF EXISTING UTILITY MAPS
AND DRAWINGS MADE AVAILABLE TO THE SURVEYOR AT THE TIME
OF SURVEY. THE SURVEYOR DOES NOT CERTIFY THAT THE
UNDERGROUND UTILITIES SHOWN COMPRISE ALL UNDERGROUND
UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED.
FURTHERMORE, THE SURVEYOR DOES NOT CERTIFY THAT THE
UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION
DEPICTED ALTHOUGH HE DOES CERTIFY THAT THEY ARE DEPICTED
AS ACCURATELY AS POSSIBLE FROM INFORMATION MADE
AVAILABLE TO THE SURVEYOR AT THE TIME OF SURVEY. THE
SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND
UTILITIES SHOWN HEREON BY EXCAVATION UNLESS OTHERWISE
NOTED ON THIS SURVEY.
MISSOURI ONE CALL TICKET NUMBER: #200431409, 200431440,
200431475, 200440745.

NOTES:

- 6 DISTURBED AREA SHALL BE FERTILIZED, MULCHED AND SEEDED WITH A THREE WAY BLEND OF TALL TURF
TYPE FESCUE. (REFER TO SEEDING REQUIREMENTS ON SHEET W-C900.) ALL SEEDED AREAS WITHIN 10' OF
SIDEWALKS AND BUILDING, WITHIN 5' OF STORM OUTFALLS AND ON SLOPES STEEPER THAN 4:1 SHALL BE
PROTECTED WITH A TYPE 2 EROSION CONTROL BLANKET (NORTH AMERICAN GREEN S75BN OR APPROVED
EQUAL).
- 7 CONCRETE STOOP (REFERENCE STRUCTURAL PLANS)
- 8 PROPOSED FENCING (REFERENCE ARCHITECTURAL PLANS FOR DETAILS AND FENCING OUTSIDE DRAWING
LIMITS)
- 12 WHITE PARKING LOT STRIPING (SEE SPECIFICATIONS THIS SHEET)
- 123 GORE AREA, 4" WHITE STRIPE AT 45 TO DIRECTION OF TRAVEL, SPACE AT 2'.
- 120 PAINT CURB YELLOW TO DENOTE FIRE LANE. CONFIRM LIMITS WITH FIRE DEPARTMENT. (SEE SPECIFICATIONS
THIS SHEET)
- 53 REWORK AND EXTEND MODULAR BLOCK WALL AS REQUIRED TO INSTALL SIDEWALK AND RAMP AT THE
GRADES SHOWN. MATERIAL AND COLOR TO MATCH EXISTING.
- 54 CAST IN PLACE CONCRETE WALL (REFER TO ARCHITECTURAL AND STRUCTURAL PLAN SHEETS FOR DETAILS
AND H-C350 FOR LINE AND GRADE)
- 55 CONCRETE SLAB FOR BLEACHER PAD, MATCH EXISTING PAD THICKNESS (ASSUME 6" FOR BIDDING). DOWEL
INTO EXISTING SLAB AT 18" ON CENTER.
- 60 STORM SEWER STRUCTURE (SEE C600 SERIES SHEETS)
- 70 SANITARY SEWER STRUCTURE (SEE SHEET C500 SERIES SHEETS)
- 95 PROPOSED TRANSFORMER ON HOUSE KEEPING PAD/ELECTRICAL APPURTENANCE. COORDINATE WITH MEP
PLANS.

SITE DATA:

PROJECT AREA/AREA OF DISTURBANCE
TOTAL: 32,650 SF (1.21 AC.)
IMPERVIOUS COVERAGE WITHIN PROJECT AREA
EXISTING: 44,940 S.F.
PROPOSED: 45,220 S.F.
INCREASE: 280 S.F.

STORMWATER MANAGEMENT:

NO STORM WATER MANAGEMENT CONTROLS ARE PROPOSED AS PART OF THE LSHS
ATHLETICS PROJECT.

PROJECT CONTROL:

CP #200
1/2" REBAR W/ ORANGE KVE CAP
NORTHING: 996572.08 (GROUND)
EASTING: 282748.76 (GROUND)
ELEV = 1049.49

CP #201
1/2" REBAR W/ ORANGE KVE CAP
NORTHING: 996570.39 (GROUND)
EASTING: 282705.45 (GROUND)
ELEV = 1048.24

CP #202
1/2" REBAR W/ ORANGE KVE CAP
NORTHING: 996569.25 (GROUND)
EASTING: 282668.97 (GROUND)
ELEV = 1042.52

CP #203
MAG NAIL
NORTHING: 996957.62 (GROUND)
EASTING: 282672.48 (GROUND)
ELEV = 1039.43

CP #204
1/2" REBAR W/ ORANGE KVE CAP
NORTHING: 997397.36 (GROUND)
EASTING: 282668.45 (GROUND)
ELEV = 1023.04

CP #205
1/2" REBAR W/ ORANGE KVE CAP
NORTHING: 997403.51 (GROUND)
EASTING: 282649.31 (GROUND)
ELEV = 1018.15

CP #206
1/2" REBAR W/ ORANGE KVE CAP
NORTHING: 997885.93 (GROUND)
EASTING: 282656.03 (GROUND)
ELEV = 1012.56

CP #207
1/2" REBAR W/ ORANGE KVE CAP
NORTHING: 997970.64 (GROUND)
EASTING: 282660.58 (GROUND)
ELEV = 1014.79

CONSTRUCTION NOTES:

1. COORDINATE START-UP AND ALL CONSTRUCTION ACTIVITIES WITH THE ARCHITECT.
2. CONSTRUCTION METHODS AND MATERIALS NOT SPECIFIED IN THESE PLANS ARE TO MEET OR EXCEED THE KANSAS
CITY METROPOLITAN CHAPTER OF APWA STANDARD SPECIFICATIONS AS ADOPTED AND AMENDED BY THE CITY OF
LEE'S SUMMIT.
3. ALL CONSTRUCTION WORK AND UTILITY WORK OUTSIDE OF PROPERTY BOUNDARIES SHALL BE PERFORMED IN
COOPERATION WITH AND IN ACCORDANCE WITH REGULATIONS OF THE AUTHORITY.
4. PUBLIC CONVENIENCE AND SAFETY: THE CONTRACTOR SHALL CONDUCT THE WORK IN A MANNER THAT WILL INSURE,
AS FAR AS PRACTICABLE, THE LEAST OBSTRUCTION TO TRAFFIC, AND SHALL PROVIDE FOR THE CONVENIENCE AND
SAFETY OF THE GENERAL PUBLIC, ALONG AND ADJACENT TO CONSTRUCTION AREA.
5. CONTRACTOR IS REQUIRED TO PROTECT TRACK AND TENNIS COURTS DURING CONSTRUCTION. STAGE WORK AND
ACCESS ACCORDINGLY. DAMAGE TO TRACK PAVING OR SURFACING CAUSED BY CONSTRUCTION ACTIVITIES WILL BE
REPAIRED AT CONTRACTORS EXPENSE. TEMPORARY FENCING MAY BE REQUIRED AROUND TENNIS COURT AND TRACK IF
WORK SCHEDULE CONFLICTS WITH LSHS ATHLETICS SCHEDULE. COORDINATE WITH SCHOOL DISTRICT.
6. WORK SOUTH AND WEST OF DEMARCATION LINE IS LIMITED TO THE EXTENTS NECESSARY TO EXCAVATE AND INSTALL
UTILITIES AND TIE OUT GRADE TO EXISTING PAVING. UPON COMPLETION, PAVING SHALL SLOPE TO WEST. COORDINATE
CONSTRUCTION SCHEDULE WITH LEE'S SUMMIT SCHOOL DISTRICT AND JE DUNN CONSTRUCTION.
7. REFER TO SHEET H-C190 FOR SECTIONS A-A, B-B, C-C AND D-D.

SITE BENCHMARKS:

BM-60
FOUND CUT SQUARE AT THE WEST NORTHWEST
CONCRETE HEADWALL ON THE WEST SIDE OF THE
EAST ENTRY DRIVE TO LEE'S SUMMIT HIGH
SCHOOL
ELEVATION= 1042.70

BM-61
SET CUT SQUARE WITH PUNCH IN THE
SOUTHWEST EDGE ON A CONCRETE LIGHT BASE
ON THE NORTH SIDE OF THE DRIVE LANE AT
THE HIGH SCHOOL ADMINISTRATION CENTER
ENTRY
ELEVATION= 1042.74

BM-62
SET CUT SQUARE AT THE NORTHEAST CORNER
OF THE FIRST STEP UP OF A CONCRETE WALK
ON THE NORTH SIDE OF THE EAST MAIN WING.
ELEVATION= 1040.51

BM-63
SET CUT SQUARE AT THE TOP NORTHEAST
CORNER OF A CONCRETE PATIO WITH COVERED
TABLES ON THE EAST SIDE OF BUILDING "B".
ELEVATION= 1015.74

BM-64
SET CUT SQUARE AT THE TOP NORTHEAST
CORNER OF STEPS TO THE NORTH ENTRY TO
BUILDING "B" ON THE WEST SIDE.
ELEVATION= 1015.34

HORIZONTAL AND VERTICAL DATUM:

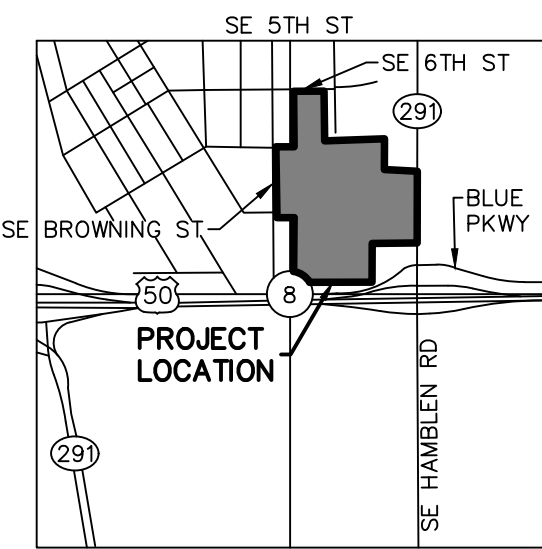
UNLESS OTHERWISE NOTED THE COORDINATES SHOWN HEREON ARE GROUND
COORDINATES BASED ON THE MISSOURI STATE PLANE (1983) WEST ZONE
(NAD 1983) (NAD 1988)
GCS: 0.9999978
SCALED AROUND 0.0

NA-25 (PID: 095025)
NORTHING: 303646.030 (GRID/METERS) 996313.829 (GROUND/FEET)
EASTING: 86090.475 (GRID/METERS) 2824923.692 (GROUND/FEET)
ELEVATION: 321.8 (METERS) 1055.77 (FEET)

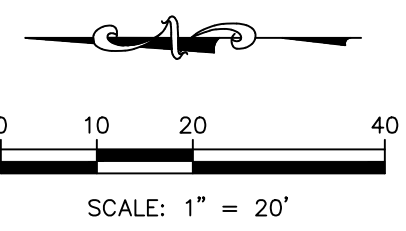
◇	NORTHING	EASTING	DESCRIPTION
1000	997666.29	2827157.98	SW
1001	997666.89	2827141.99	SW
1002	997617.66	2827156.15	SW
1003	997615.44	2827212.45	SW
1004	997588.06	2827180.98	SW
1005	997361.01	2827202.33	SW
1006	997424.60	2827132.94	SW
1007	997430.60	2826988.79	SW
1008	997419.66	2827059.22	BC
1009	997417.80	2827103.99	BC
1010	997350.74	2827101.20	BC
1011	997346.33	2827101.02	BC
1012	997338.00	2827108.68	BC
1013	997337.92	2827110.68	BC
1014	997313.61	2827109.66	BC
1015	997298.07	2827111.47	BC
1016	997277.56	2827122.94	BC
1017	997257.55	2827141.47	BC
1018	997226.13	2827170.57	BC
1019	997203.52	2827183.53	BC
1020	997143.29	2827201.76	BC
1021	997128.65	2827211.62	BC
1022	997135.17	2827217.07	BC
1023	997145.76	2827209.90	BC
1024	997123.01	2827222.69	BC
1025	997151.98	2827230.48	R30.0
1026	997195.56	2827196.02	SW
1027	997193.73	2827228.10	SW
1028	997172.65	2827298.09	SW
1029	997164.67	2827297.49	SW
1030	997366.92	2827497.46	SW

◇	NORTHING	EASTING	DESCRIPTION
1031	997355.75	2827502.73	SW
1032	997328.13	2827494.60	SW
1033	997327.15	2827494.80	SW
1034	997325.11	2827485.01	SW
1035	997325.74	2827469.88	SW
1036	997292.51	2827507.93	SW
1037	997288.07	2827486.59	SW
1038	997276.83	2827484.29	SW
1039	997267.46	2827486.24	SW
1040	997233.78	2827448.79	SW
1041	997224.03	2827441.84	SW
1042	997219.68	2827447.02	SW
1043	997260.34	2827487.61	SW
1044	997257.31	2827500.96	SW
1045	997251.48	2827499.53	SW
1046	997250.14	2827505.41	BC
1047	997279.23	2827512.43	BC
1048	997275.77	2827527.99	BC
1049	997284.88	2827530.23	SW
1050	997413.01	2826978.58	SAWCUT
1051	997408.39	2827069.54	SAWCUT
1052	997403.18	2827096.17	SAWCUT
1053	997387.25	2827095.28	SAWCUT
1054	997340.26	2827044.54	SAWCUT
1055	997335.86	2827048.61	SAWCUT
1056	997378.63	2827094.79	SAWCUT
1057	997299.22	2827090.36	SAWCUT
1058	997278.96	2827068.92	SAWCUT
1059	997258.92	2827083.19	SAWCUT
1060	997282.55	2827108.18	SAWCUT
1061	997395.25	2827471.39	SW

◇	NORTHING	EASTING	DESCRIPTION
1062	997445.85	2827500.69	SW
1063	997440.36	2827472.95	SW
1064	997453.51	2827506.92	SW
1065	997455.17	2827473.66	SW
1066	997495.66	2827508.63	SW
1067	997547.00	2827477.28	SW
1068	997578.01	2827511.71	SW
1069	997578.34	2827501.81	SW
1070	997577.77	2827484.89	SW
1071	997562.81	2827484.30	SW
1072	997563.03	2827477.88	SW
1073	997532.28	2827137.51	BLDG COR
1074	997509.63	2827136.61	BLDG COR
1075	997417.52	2827122.00	BLDG COR
1076	997337.59	2827118.67	BLDG COR
1077	997280.31	2827131.40	BLDG COR
1078	997242.04	2827166.61	BLDG COR
1079	997557.06	2827504.83	SW
1080	997500.93	2827502.90	SW
1081	997496.08	2827497.19	SW
1082	997117.07	2827218.25	SAWCUT
1083	997115.49	2827232.51	SAWCUT
1084	997123.54	2827232.82	SAWCUT
1085	997123.71	2827228.61	SAWCUT
1086	997171.13	2827210.53	SW
1087	997166.28	2827234.25	SAWCUT WALL



Know what's Below.
Call before you dig.



SCALE: 1" = 20'



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David Wood Date: 09/28/2020
Engineer License No. PE-2011037427

REVISIONS	DESCRIPTION	DATE
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3	PROJ05	12/07/20

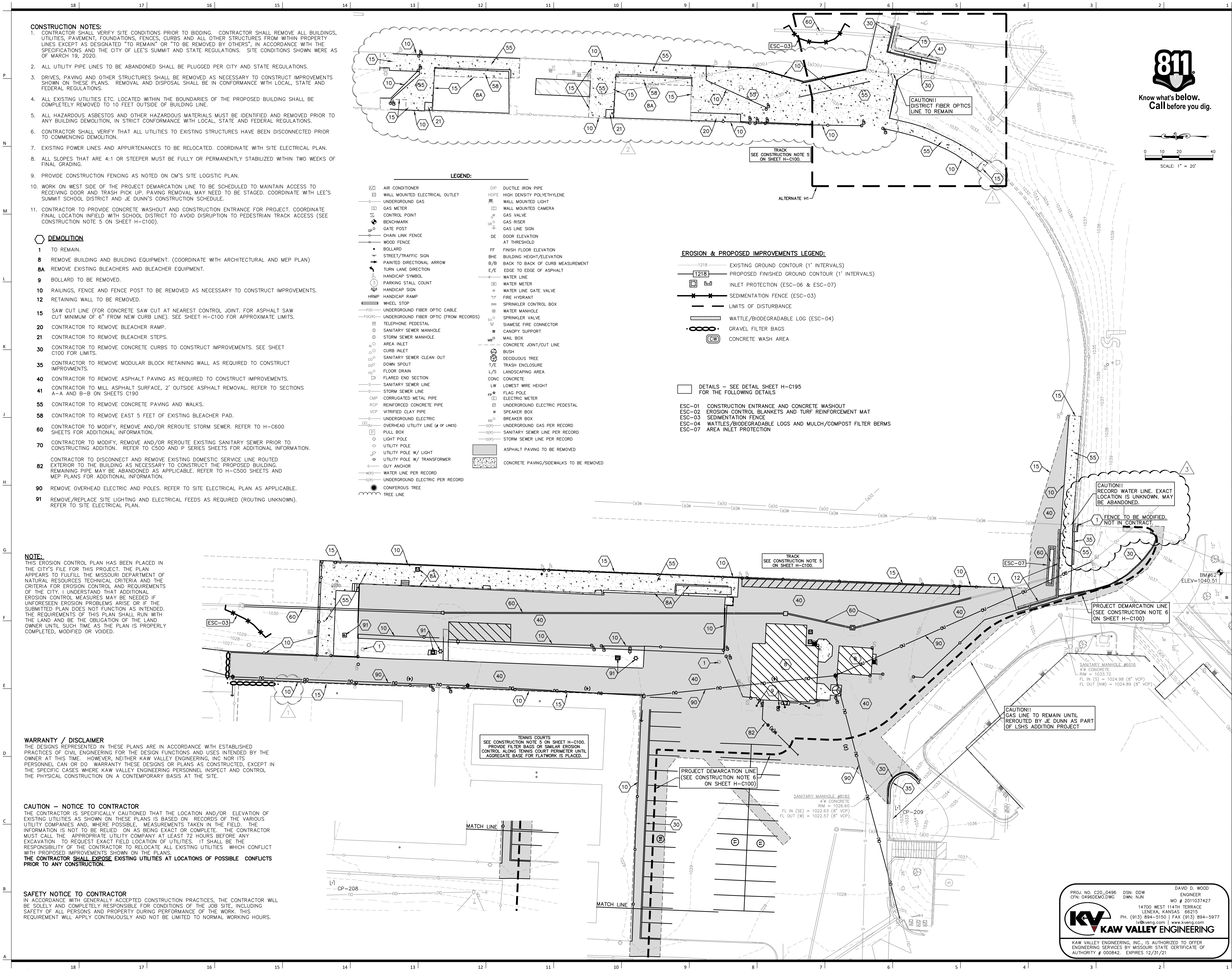
PROJECT NO: 0119-0100
DATE: SEPTEMBER 28, 2020

SITE AND DIMENSION PLAN

H-C100

BID SET

NOTE:
1. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT
LOCATIONS AND DIMENSIONS OF ENTRANCE, SLOPED PAVING, EXIT
PORCHES, RAMPS, PRECISE BUILDING DIMENSIONS AND EXACT
BUILDING UTILITY ENTRANCE



- CONSTRUCTION NOTES:**
1. CONTRACTOR SHALL VERIFY SITE CONDITIONS PRIOR TO BIDDING. CONTRACTOR SHALL REMOVE ALL BUILDINGS, UTILITIES, PAVEMENT, FOUNDATIONS, FENCES, CURBS AND ALL OTHER STRUCTURES FROM WITHIN PROPERTY LINES EXCEPT AS DESIGNATED "TO REMAIN" OR "TO BE REMOVED BY OTHERS", IN ACCORDANCE WITH THE SPECIFICATIONS AND THE CITY OF LEE'S SUMMIT AND STATE REGULATIONS. SITE CONDITIONS SHOWN WERE AS OF MARCH 19, 2020.
 2. ALL UTILITY PIPE LINES TO BE ABANDONED SHALL BE PLUGGED PER CITY AND STATE REGULATIONS.
 3. DRIVES, PAVING AND OTHER STRUCTURES SHALL BE REMOVED AS NECESSARY TO CONSTRUCT IMPROVEMENTS SHOWN ON THESE PLANS. REMOVAL AND DISPOSAL SHALL BE IN CONFORMANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.
 4. ALL EXISTING UTILITIES ETC. LOCATED WITHIN THE BOUNDARIES OF THE PROPOSED BUILDING SHALL BE COMPLETELY REMOVED TO 10 FEET OUTSIDE OF BUILDING LINE.
 5. ALL HAZARDOUS ASBESTOS AND OTHER HAZARDOUS MATERIALS MUST BE IDENTIFIED AND REMOVED PRIOR TO ANY BUILDING DEMOLITION, IN STRICT CONFORMANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.
 6. CONTRACTOR SHALL VERIFY THAT ALL UTILITIES TO EXISTING STRUCTURES HAVE BEEN DISCONNECTED PRIOR TO COMMENCING DEMOLITION.
 7. EXISTING POWER LINES AND APPURTENANCES TO BE RELOCATED. COORDINATE WITH SITE ELECTRICAL PLAN.
 8. ALL SLOPES THAT ARE 4:1 OR STEEPER MUST BE FULLY OR PERMANENTLY STABILIZED WITHIN TWO WEEKS OF FINAL GRADING.
 9. PROVIDE CONSTRUCTION FENCING AS NOTED ON CM'S SITE LOGISTIC PLAN.
 10. WORK ON WEST SIDE OF THE PROJECT DEMARCATION LINE TO BE SCHEDULED TO MAINTAIN ACCESS TO RECEIVING DOOR AND TRASH PICK UP. PAVING REMOVAL MAY NEED TO BE STAGED. COORDINATE WITH LEE'S SUMMIT SCHOOL DISTRICT AND JE DUNN'S CONSTRUCTION SCHEDULE.
 11. CONTRACTOR TO PROVIDE CONCRETE WASHOUT AND CONSTRUCTION ENTRANCE FOR PROJECT. COORDINATE FINAL LOCATION INFIELD WITH SCHOOL DISTRICT TO AVOID DISRUPTION TO PEDESTRIAN TRACK ACCESS (SEE CONSTRUCTION NOTE 5 ON SHEET H-C100).

- DEMOLITION**
- 1 TO REMAIN.
 - 8 REMOVE BUILDING AND BUILDING EQUIPMENT. (COORDINATE WITH ARCHITECTURAL AND MEP PLAN)
 - 8A REMOVE EXISTING BLEACHERS AND BLEACHER EQUIPMENT.
 - 9 BOLLARD TO BE REMOVED.
 - 10 RAILINGS, FENCE AND FENCE POST TO BE REMOVED AS NECESSARY TO CONSTRUCT IMPROVEMENTS.
 - 12 RETAINING WALL TO BE REMOVED.
 - 15 SAW CUT LINE (FOR CONCRETE SAW CUT AT NEAREST CONTROL JOINT. FOR ASPHALT SAW CUT MINIMUM OF 6" FROM NEW CURB LINE). SEE SHEET H-C100 FOR APPROXIMATE LIMITS.
 - 20 CONTRACTOR TO REMOVE BLEACHER RAMP.
 - 21 CONTRACTOR TO REMOVE BLEACHER STEPS.
 - 30 CONTRACTOR TO REMOVE CONCRETE CURBS TO CONSTRUCT IMPROVEMENTS. SEE SHEET C100 FOR LIMITS.
 - 35 CONTRACTOR TO REMOVE MODULAR BLOCK RETAINING WALL AS REQUIRED TO CONSTRUCT IMPROVEMENTS.
 - 40 CONTRACTOR TO REMOVE ASPHALT PAVING AS REQUIRED TO CONSTRUCT IMPROVEMENTS.
 - 41 CONTRACTOR TO MILL ASPHALT SURFACE, 2' OUTSIDE ASPHALT REMOVAL. REFER TO SECTIONS A-A AND B-B ON SHEETS C190
 - 55 CONTRACTOR TO REMOVE CONCRETE PAVING AND WALKS.
 - 58 CONTRACTOR TO REMOVE EAST 5 FEET OF EXISTING BLEACHER PAD.
 - 60 CONTRACTOR TO MODIFY, REMOVE AND/OR REROUTE STORM SEWER. REFER TO H-C600 SHEETS FOR ADDITIONAL INFORMATION.
 - 70 CONTRACTOR TO MODIFY, REMOVE AND/OR REROUTE EXISTING SANITARY SEWER PRIOR TO CONSTRUCTING ADDITION. REFER TO C500 AND P SERIES SHEETS FOR ADDITIONAL INFORMATION.
 - CONTRACTOR TO DISCONNECT AND REMOVE EXISTING DOMESTIC SERVICE LINE ROUTED EXTERIOR TO THE BUILDING AS NECESSARY TO CONSTRUCT THE PROPOSED BUILDING. REMAINING PIPE MAY BE ABANDONED AS APPLICABLE. REFER TO H-C500 SHEETS AND MEP PLANS FOR ADDITIONAL INFORMATION.
 - 90 REMOVE OVERHEAD ELECTRIC AND POLES. REFER TO SITE ELECTRICAL PLAN AS APPLICABLE.
 - 91 REMOVE/REPLACE SITE LIGHTING AND ELECTRICAL FEEDS AS REQUIRED (ROUTING UNKNOWN). REFER TO SITE ELECTRICAL PLAN.

NOTE:
THIS EROSION CONTROL PLAN HAS BEEN PLACED IN THE CITY'S FILE FOR THIS PROJECT. THE PLAN APPEARS TO FULFILL THE MISSOURI DEPARTMENT OF NATURAL RESOURCES TECHNICAL CRITERIA AND THE CRITERIA FOR EROSION CONTROL AND REQUIREMENTS OF THE CITY. I UNDERSTAND THAT ADDITIONAL EROSION CONTROL MEASURES MAY BE NEEDED IF UNFORESEEN EROSION PROBLEMS ARISE OR IF THE SUBMITTED PLAN DOES NOT FUNCTION AS INTENDED. THE REQUIREMENTS OF THIS PLAN SHALL RUN WITH THE LAND AND BE THE OBLIGATION OF THE LAND OWNER UNTIL SUCH TIME AS THE PLAN IS PROPERLY COMPLETED, MODIFIED OR VOIDED.

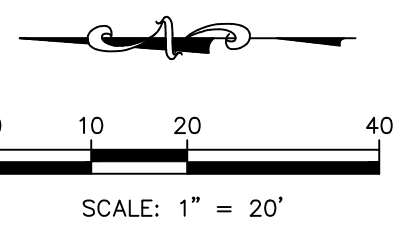
WARRANTY / DISCLAIMER
THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENDED BY THE OWNER AT THIS TIME. HOWEVER, NEITHER KAW VALLEY ENGINEERING, INC NOR ITS PERSONNEL CAN OR DO WARRANTY THESE DESIGNS OR PLANS AS CONSTRUCTED, EXCEPT IN THE SPECIFIC CASES WHERE KAW VALLEY ENGINEERING PERSONNEL INSPECT AND CONTROL THE PHYSICAL CONSTRUCTION ON A CONTEMPORARY BASIS AT THE SITE.

CAUTION - NOTICE TO CONTRACTOR
THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH PROPOSED IMPROVEMENTS SHOWN ON THE PLANS. THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICTS PRIOR TO ANY CONSTRUCTION.

SAFETY NOTICE TO CONTRACTOR
IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

- LEGEND:**
- | | | | |
|--|----------------------------------------|--|-----------------------------------------|
| | AIR CONDITIONER | | DUCTILE IRON PIPE |
| | WALL MOUNTED ELECTRICAL OUTLET | | HIGH DENSITY POLYETHYLENE |
| | UNDERGROUND GAS | | WALL MOUNTED LIGHT |
| | GAS METER | | WALL MOUNTED CAMERA |
| | CONTROL POINT | | GAS VALVE |
| | BENCHMARK | | GAS RISER |
| | GATE POST | | GAS LINE SIGN |
| | CHAIN LINK FENCE | | DOOR ELEVATION AT THRESHOLD |
| | WOOD FENCE | | FINISH FLOOR ELEVATION |
| | BOLLARD | | BUILDING HEIGHT/ELEVATION |
| | STREET/TRAFFIC SIGN | | BACK TO BACK OF CURB MEASUREMENT |
| | PAINTED DIRECTIONAL ARROW | | EDGE TO EDGE OF ASPHALT |
| | TURN LANE DIRECTION | | WATER LINE |
| | HANDICAP SYMBOL | | WATER METER |
| | PARKING STALL COUNT | | WATER LINE GATE VALVE |
| | HANDICAP SIGN | | FIRE HYDRANT |
| | HANDICAP RAMP | | SPRINKLER CONTROL BOX |
| | WHEEL STOP | | WATER MANHOLE |
| | UNDERGROUND FIBER OPTIC CABLE | | SPRINKLER VALVE |
| | UNDERGROUND FIBER OPTIC (FROM RECORDS) | | SIAMESE FIRE CONNECTOR |
| | TELEPHONE PEDESTAL | | CANOPY SUPPORT |
| | SANITARY SEWER MANHOLE | | MAIL BOX |
| | STORM SEWER MANHOLE | | CONCRETE JOINT/CUT LINE |
| | AREA INLET | | BUSH |
| | CURB INLET | | DECIDUOUS TREE |
| | SANITARY SEWER CLEAN OUT | | TRASH ENCLOSURE |
| | DOWN SPOUT | | LANDSCAPING AREA |
| | FLARED END SECTION | | CONCRETE |
| | SANITARY SEWER LINE | | LOWEST WIRE HEIGHT |
| | STORM SEWER LINE | | FLAG POLE |
| | CORRUGATED METAL PIPE | | ELECTRIC METER |
| | REINFORCED CONCRETE PIPE | | UNDERGROUND ELECTRIC PEDESTAL |
| | VITRIFIED CLAY PIPE | | SPEAKER BOX |
| | UNDERGROUND ELECTRIC | | BREAKER BOX |
| | OVERHEAD UTILITY LINE (if of Lines) | | UNDERGROUND GAS PER RECORD |
| | PULL BOX | | SANITARY SEWER LINE PER RECORD |
| | LIGHT POLE | | STORM SEWER LINE PER RECORD |
| | UTILITY POLE | | ASPHALT PAVING TO BE REMOVED |
| | UTILITY POLE W/ LIGHT | | CONCRETE PAVING/SIDEWALKS TO BE REMOVED |
| | UTILITY POLE W/ TRANSFORMER | | |
| | GUY ANCHOR | | |
| | WATER LINE PER RECORD | | |
| | UNDERGROUND ELECTRIC PER RECORD | | |
| | CONIFEROUS TREE | | |
| | TREE LINE | | |

- EROSION & PROPOSED IMPROVEMENTS LEGEND:**
- 1218 EXISTING GROUND CONTOUR (1' INTERVALS)
 - 1218 PROPOSED FINISHED GROUND CONTOUR (1' INTERVALS)
 - INLET PROTECTION (ESC-06 & ESC-07)
 - SEDIMENTATION FENCE (ESC-03)
 - LIMITS OF DISTURBANCE
 - WATTLE/BIODEGRADABLE LOG (ESC-04)
 - GRAVEL FILTER BAGS
 - CONCRETE WASH AREA
- DETAILS - SEE DETAIL SHEET H-C195 FOR THE FOLLOWING DETAILS
- ESC-01 CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT
 - ESC-02 EROSION CONTROL BLANKETS AND TURF REINFORCEMENT MAT
 - ESC-03 SEDIMENTATION FENCE
 - ESC-04 WATTLES/BIODEGRADABLE LOGS AND MULCH/COMPOST FILTER BERMS
 - ESC-07 AREA INLET PROTECTION



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**Lee's Summit R7 District
Athletics Facilities**

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400 SE Blue Parkway
Lee's Summit, MO 64063

owner:
Lee's Summit R7 School District
301 NE Tudor Road
Lee's Summit, MO 64086

architect:
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816.663.8700

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DAVID D. WOOD
Professional Engineer
PE-2011037427
12.7.2020

Kaw Valley Engineering, Inc.
Missouri Certificate of Authority: 000842
David Wood Date: 09/28/2020
Engineer License No. PE-2011037427

REVISIONS		
Number	DESCRIPTION	DATE
1	Addendum 1	10/13/20
2	Addendum 3	10/23/20
3	PRO05	12/07/20

PROJECT NO: 0119-0100
DATE: SEPTEMBER 28, 2020

**DEMOLITION AND
EROSION CONTROL PLAN**

H-C200

BID SET

PROJ. NO. C200_0496 DSN: DDW DAVID D. WOOD
CFN: 0496DEMO.DWG DWN: NJN ENGINEER
MO # 2011037427
14700 WEST 114TH TERRACE
LENEXA, KANSAS 66215
PH. (913) 894-5150 / FAX (913) 894-5977
kv@gveng.com | www.kveng.com

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Lee's Summit, MO 64063

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816.663.8700

CP #200
1/2" REBAR W/ ORANGE KVE CAP
NORTHING: 996572.06 (GROUND) 996470.24 (GRID)
EASTING: 2827438.76 (GROUND) 2827149.83 (GRID)
ELEV = 1049.49

CP #201
1/2" REBAR W/ ORANGE KVE CAP
NORTHING: 996570.39 (GROUND) 996468.55 (GRID)
EASTING: 2827055.45 (GROUND) 2826766.55 (GRID)
FILEV = 1048.24

CP #202
1/2" REBAR W/ ORANGE KVE CAP
NORTHING: 996569.25 (GROUND) 996467.41 (GRID)
EASTING: 2826689.97 (GROUND) 2826401.11 (GRID)
FLYV = 1042.52

CP #203
MAG NAIL
NORTHING: 996957.62 (GROUND) 996855.74 (GRID)
EASTING: 2826712.48 (GROUND) 2826423.62 (GRID)
FLYV = 1039.43

CP #204
1/2" REBAR W/ ORANGE KVE CAP
NORTHING: 997397.36 (GROUND) 997295.43 (GRID)
EASTING: 2826684.55 (GROUND) 2826395.70 (GRID)
ELEV = 1023.04

CP #205
1/2" REBAR W/ ORANGE KVE CAP
NORTHING: 997403.51 (GROUND) 997301.59 (GRID)
EASTING: 2826495.31 (GROUND) 2826206.47 (GRID)

CP #206
1/2" REBAR W/ ORANGE KVE CAP
NORTHING: 997985.93 (GROUND) 997883.94 (GRID)
EASTING: 2826567.03 (GROUND) 2826278.18 (GRID)

ELEV = 1012.56

CP #207

1/2" REBAR W/ ORANGE KVE CAP

NORTHING: 997970.64 (GROUND) 997868.66 (GRID)

EASTING: 2826860.58 (GROUND) 2826571.70 (GRID)

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David Wood Date: 09/28/2020
Engineer License No. PE-2011037427

REVISIONS		
Number	DESCRIPTION	DATE
1	Addendum 1	10/13/
2	Addendum 3	10/23/
3	PROOS	12/07/

PROJECT NO: 0119-0100
DATE: SEPTEMBER 28, 2020

H-C300

BID SET



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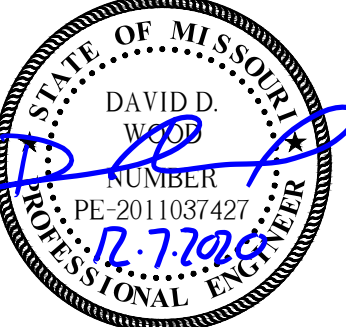
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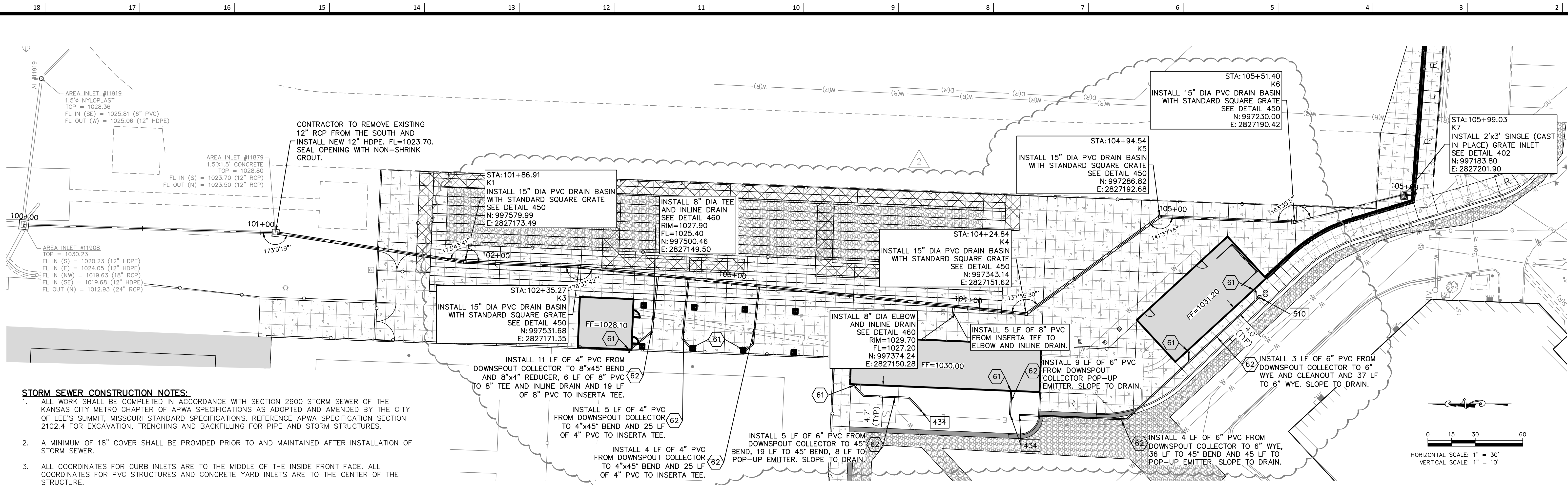
REVISIONS		
Number	DESCRIPTION	DATE
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2	Addendum 2	10/23/20
3	PROJ05	12/07/20

PROJECT NO: 0119-0100
DATE: SEPTEMBER 28, 2020

**STORM SEWER
PLAN AND PROFILE**

H-C600

BID SET



STORM SEWER CONSTRUCTION NOTES:

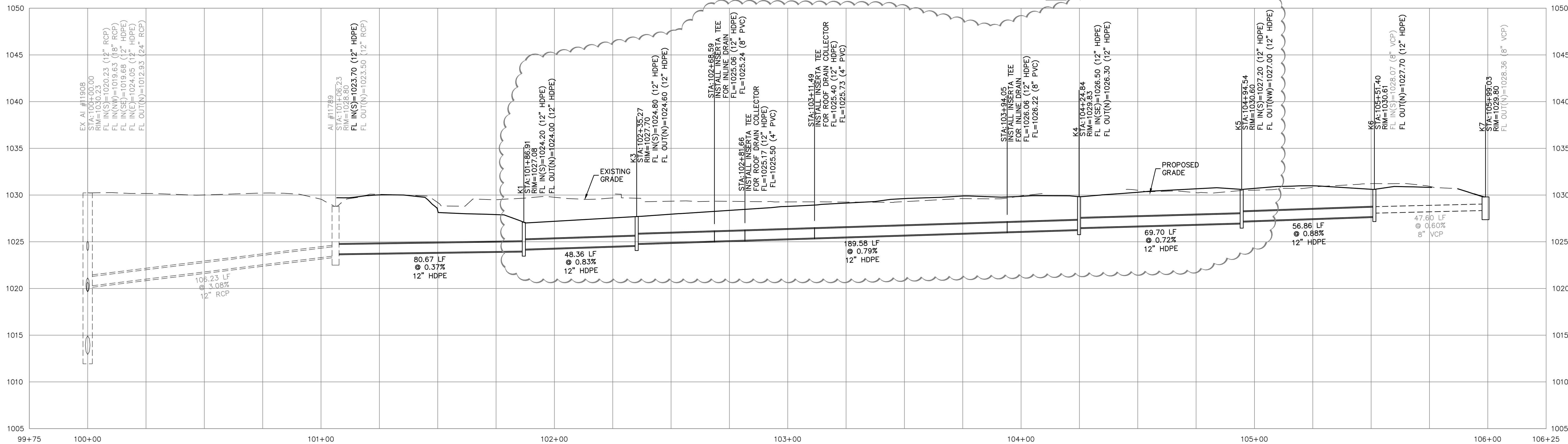
- ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH SECTION 2600 STORM SEWER OF THE KANSAS CITY METRO CHAPTER OF APWA SPECIFICATIONS AS ADOPTED AND AMENDED BY THE CITY OF LEE'S SUMMIT, MISSOURI STANDARD SPECIFICATIONS. REFERENCE APWA SPECIFICATION SECTION 2102.4 FOR EXCAVATION, TRENCHING AND BACKFILLING FOR PIPE AND STORM STRUCTURES.
- A MINIMUM OF 18" COVER SHALL BE PROVIDED PRIOR TO AND MAINTAINED AFTER INSTALLATION OF STORM SEWER.
- ALL COORDINATES FOR CURB INLETS ARE TO THE MIDDLE OF THE INSIDE FRONT FACE. ALL COORDINATES FOR PVC STRUCTURES AND CONCRETE YARD INLETS ARE TO THE CENTER OF THE STRUCTURE.
- ALL JUNCTION BOXES/AREA INLETS HAVE ONE COORDINATE PROVIDED AT THE CENTER OF STRUCTURE. SEE PLAN FOR CLARIFICATION. ORIENT STRUCTURES PARALLEL TO ADJACENT CURB, BUILDING OR WALL FACE, UNLESS NOTED OTHERWISE.
- RIM ELEVATION IS PROVIDED AT COORDINATE, UNLESS NOTED OTHERWISE. CONTRACTOR TO ADJUST ELEVATION OF RIM AS REQUIRED TO MATCH SLOPE OF ADJACENT CURB LINE. REFER TO GRADING PLAN (C300 SERIES SHEETS).
- ALL EXISTING UTILITIES INDICATED ON THE DRAWING ARE ACCORDING TO THE BEST INFORMATION AVAILABLE TO THE ENGINEER, HOWEVER, ALL UTILITIES ACTUALLY EXISTING MAY NOT BE SHOWN. UTILITIES DAMAGED THROUGH THE NEGLIGENCE OF THE CONTRACTOR TO OBTAIN THE LOCATION OF SAME SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT THEIR EXPENSE.
- ALL BACKFILL SHALL BE COMPACTED TO 95 PERCENT STANDARD DENSITY AT OPTIMUM MOISTURE.
- ALL EXCAVATION BENEATH THE STREETS AND PARKING LOTS FOR DRAINAGE PIPE LESS THAN 4'-0" IN DIAMETER SHALL BE BACKFILLED WITH AGGREGATE TO FOUR FEET (4') PAST BACK OF CURB IN ACCORDANCE WITH APWA SPECIFICATIONS SECTION 2102.4J.
- RELOCATION OF ANY WATER LINE, SEWER LINE OR SERVICE LINE THEREOF REQUIRED FOR THE CONSTRUCTION OF THIS PROJECT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE AT THEIR EXPENSE.
- IF PRECAST STORM STRUCTURES ARE TO BE USED ON THIS PROJECT, THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND HAVE THEM APPROVED BY THE ENGINEER PRIOR TO FABRICATION OF THE STRUCTURES. FAILURE TO DO SO SHALL BE CAUSE FOR REJECTION.
- ALL HDPE PIPE JOINTS SHALL BE WATER TIGHT.

DETAILS SEE SHEET C690 AND C691

- 402 SINGLE GRATE INLET
- 433 DOWNSPOUT COLLECTOR
- 434 POP-UP EMITTER
- 450 PVC DRAIN BASIN - CONTRACTOR TO ORDER INLETS ONE FOOT TALLER THAN PLAN ELEVATION SO INLET CAN BE FIELD ADJUSTED
- 460 INLINE DRAIN
- 510 CLEANOUT

NOTES

- 61 DOWNSPOUT COLLECTOR (SEE DETAIL 433 ON SHEET W-C901)
- 62 PVC SCH-40 ROOF DRAIN SLOPE TO DRAIN (1% MINIMUM FOR 6" ROOF DRAINS, 2% MINIMUM FOR 4" ROOF DRAINS)



PRIVATE STORM SEWER LINE K PROFILE

SAFETY NOTICE TO CONTRACTOR

IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

WARRANTY / DISCLAIMER

THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENDED BY THE OWNER AT THIS TIME. HOWEVER, NEITHER KAW VALLEY ENGINEERING, INC NOR ITS PERSONNEL CAN OR DO WARRANTY THESE DESIGNS OR PLANS AS CONSTRUCTED, EXCEPT IN THE SPECIFIC CASES WHERE KAW VALLEY ENGINEERING PERSONNEL INSPECT AND CONTROL THE PHYSICAL CONSTRUCTION ON A CONTEMPORARY BASIS AT THE SITE.

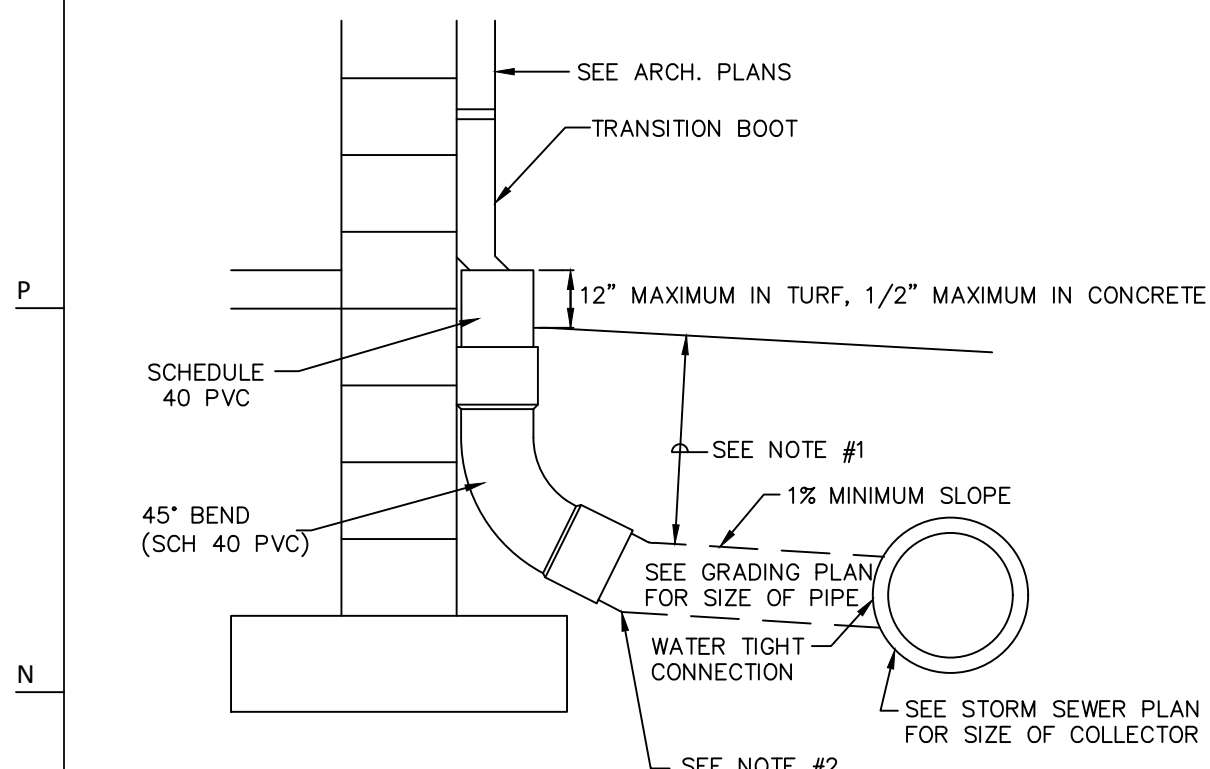
CAUTION - NOTICE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH PROPOSED IMPROVEMENTS SHOWN ON THE PLANS. THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICTS PRIOR TO ANY CONSTRUCTION.



Know what's below.
Call before you dig.

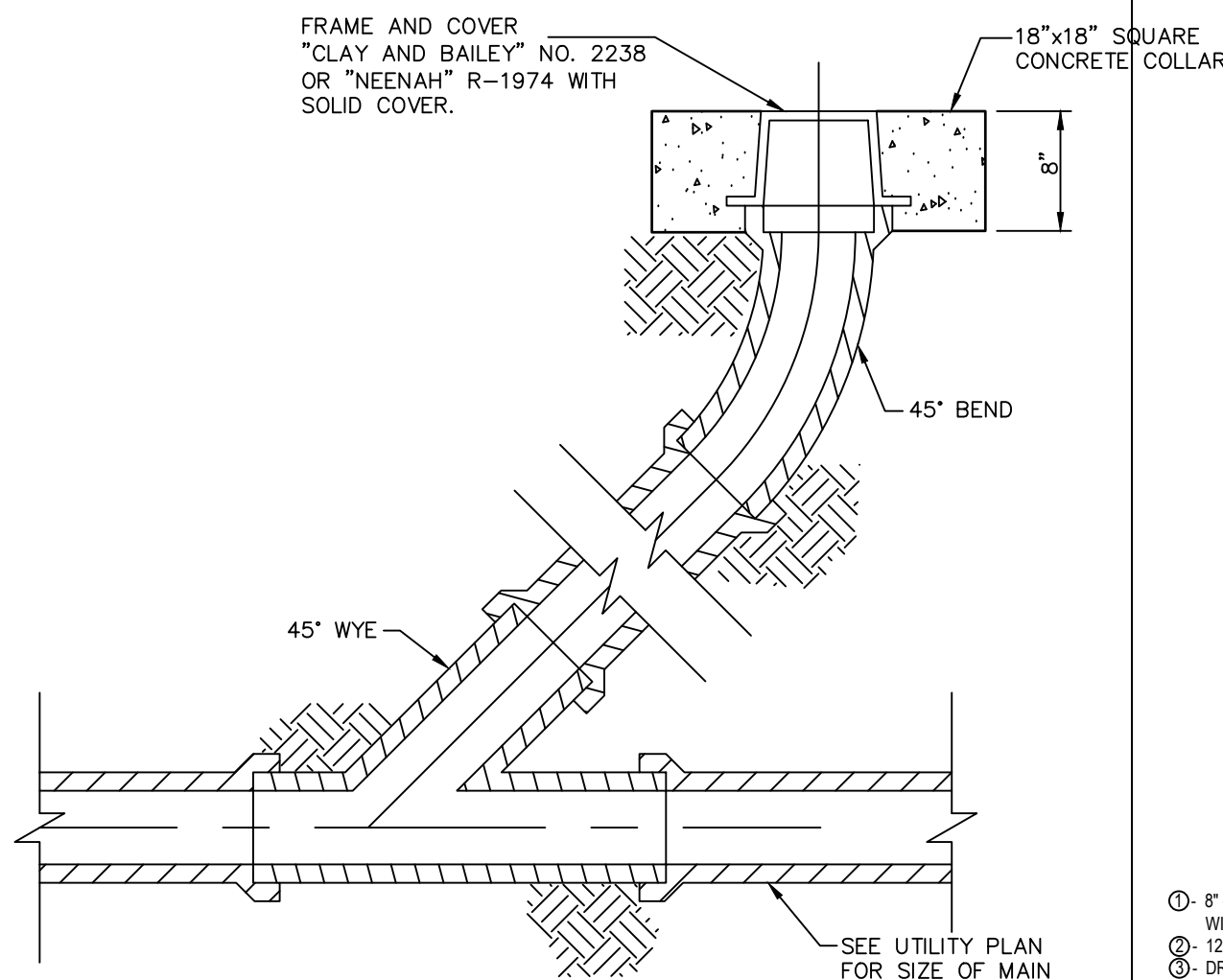
PROJ. NO. C20_0496 DSN: DDW
CFN: 0496DPP.DWG DWN: NJN
DAVID D. WOOD
ENGINEER
MO # 2011037427
14700 WEST 114TH TERRACE
LENEXA, KANSAS 66215
PH. (913) 894-5150 | FAX (913) 894-5977
lv@kvweng.com | www.kvweng.com
KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER
ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF
AUTHORITY # 000842. EXPIRES 12/31/21



- NOTES:
- 1) FOR ALL DEPTHS OF COVER LESS THAN TWO (2) FEET, PIPE MUST BE SCHEDULE 40 PVC. FOR DEPTHS OF COVER GREATER THAN TWO (2) FEET, FLEXIBLE PIPE MAY BE USED. REFER TO SPECIFICATIONS FOR ALLOWABLE PIPE TYPES.
 - 2) A WATERTIGHT CONNECTION SHALL BE MAINTAINED WITH ANY TRANSITION FROM SCHEDULE 40 PVC PIPE TO ANY OTHER PIPE TYPE.
 - 3) THE DOWNSPOUT COLLECTOR DRAIN SHALL BE INSTALLED BEFORE THE DOWNSPOUTS ARE INSTALLED ON THE BUILDING. SITEWORK CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK TO AND INCLUDING THE RODENT SCREEN. BUILDING CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONNECTION AT THE POINT OF THE RODENT SCREEN.

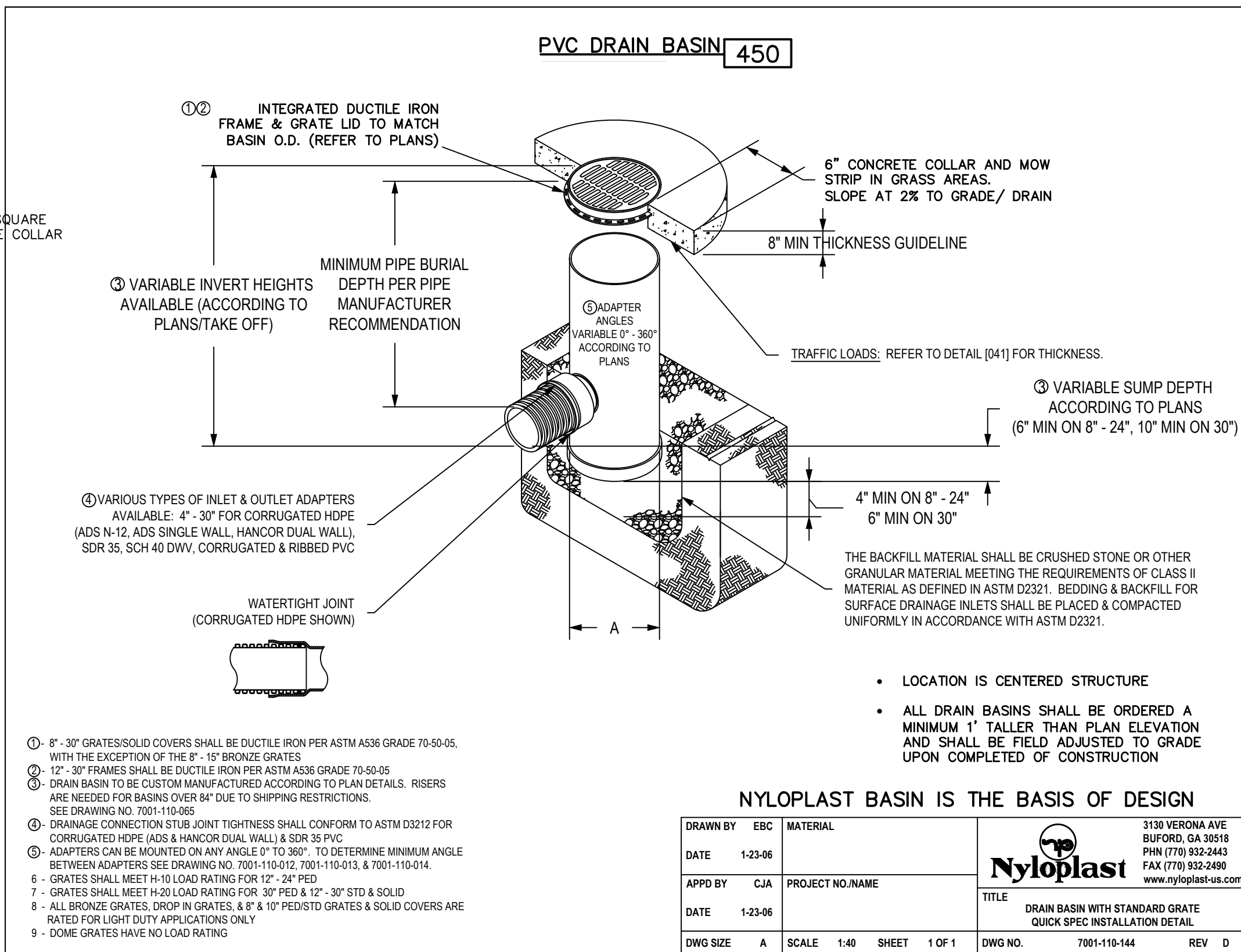
DOWNSPOUT COLLECTOR

433



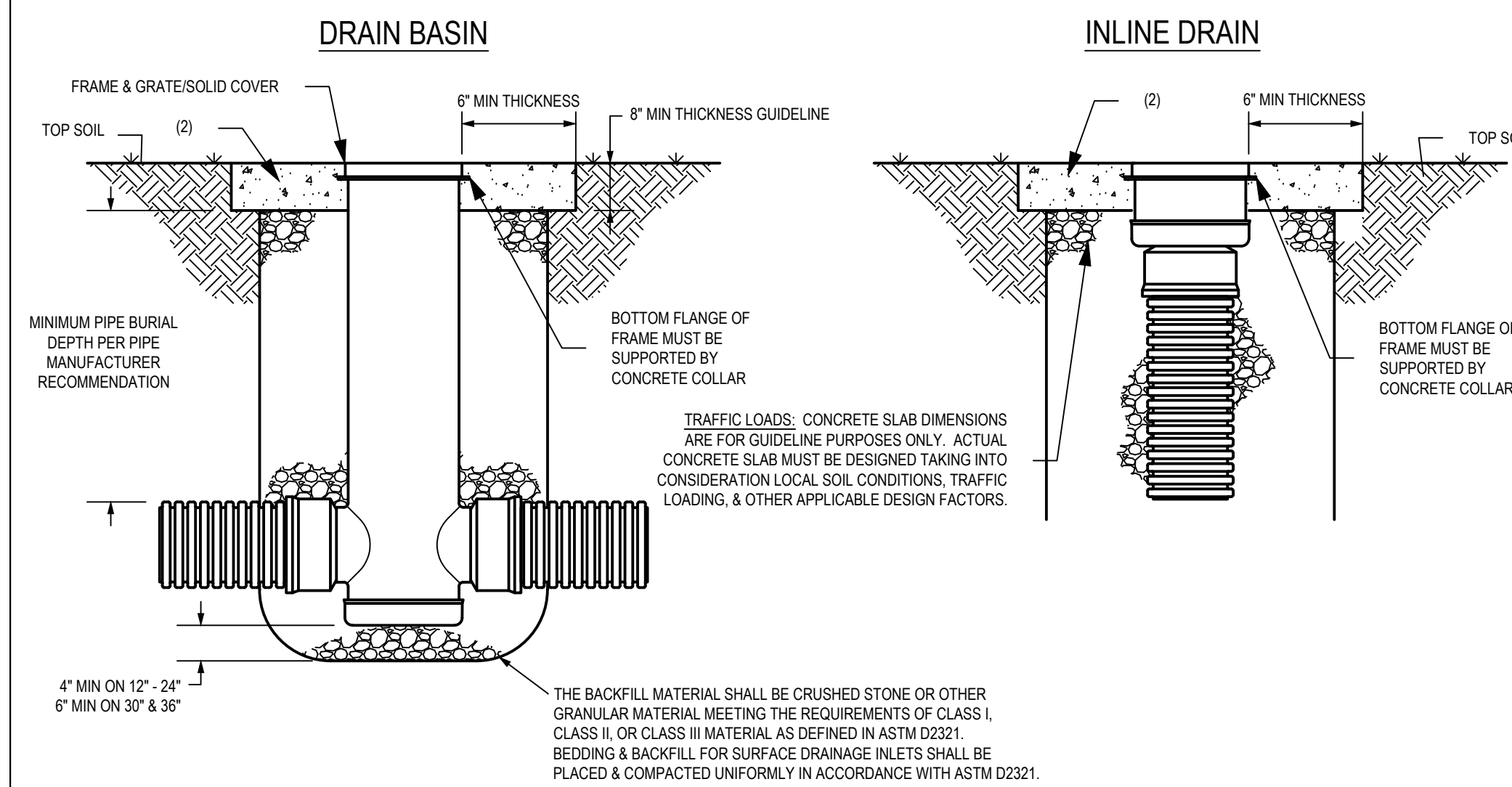
CLEAN-OUT

510



NYLOPLAST BASIN IS THE BASIS OF DESIGN

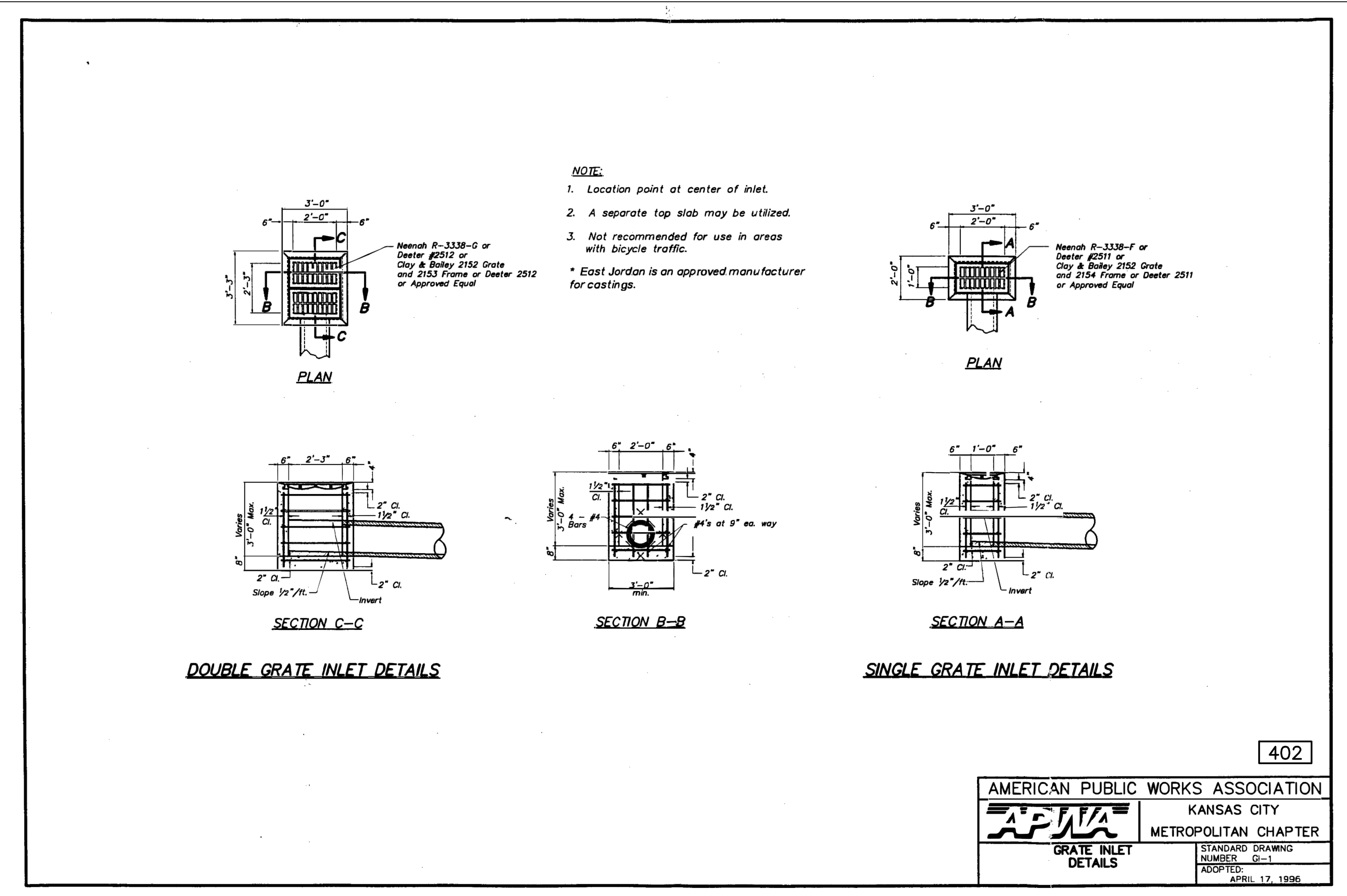
DRAWN BY	ESB	MATERIAL	310 VERONA AVE BURLINGTON, VT 05401 PH: (802) 249-2440 FAX: (802) 249-2440 www.nyloplast-usa.com
DATE	1-23-06	PROJECT NO./NAME	TITLE
APPROVED BY	CAJ	PROJECT NO./NAME	TITLE
DATE	1-23-06	PROJECT NO./NAME	TITLE
DWG SIZE	A	SCALE	1:40
SHEET	1 OF 1	DWG NO.	7001-110-144
REV	D		



1. GRATES/SOLID COVERS SHALL MEET H-20 LOAD RATING FOR 30" PEDESTRIAN & 12" - 30" STANDARD & SOLID
2. DESIGN SHOULD ACCOUNT FOR ROOT DEPTH TO ALLOW TUBE TO GROW AND PREVENT EROSION AROUND GRATE SO THAT HAZARDS DO NOT FORM.

THIS PRINT DISCLOSES SUBJECT MATTER IN WHICH NYLOPLAST HAS PROPRIETARY RIGHTS. THE RECEIPT OR POSSESSION OF THIS PRINT DOES NOT CONVEY, TRANSFER, OR LICENSE THE USE OF THE DESIGN OR TECHNICAL INFORMATION SHOWN HEREIN. REPRODUCTION OF THIS PRINT OR ANY INFORMATION CONTAINED HEREIN, OR MANUFACTURE OF ANY ARTICLE HEREFROM FOR THE DISCLOSURE TO ANY OTHER PERSON, WITHOUT THE WRITTEN PERMISSION OF NYLOPLAST, IS PROHIBITED.

DRAWN BY	ESB	MATERIAL	310 VERONA AVE BURLINGTON, VT 05401 PH: (802) 249-2440 FAX: (802) 249-2440 www.nyloplast-usa.com
DATE	01-05-09	PROJECT NO./NAME	TITLE
REVISOR BY	NMH	PROJECT NO./NAME	TITLE
DATE	06-12-15	PROJECT NO./NAME	TITLE
DWG SIZE	A	SCALE	1:25
SHEET	1 OF 1	DWG NO.	7001-110-140
REV	G		



402

AMERICAN PUBLIC WORKS ASSOCIATION	KANSAS CITY
APWA	METROPOLITAN CHAPTER
GRATE INLET DETAILS	STANDARD DRAWING
NUMBER	02-1
ADOPTED	APRIL 17, 1996

INLET NOTES

GENERAL

1. ALL STORM SEWER STRUCTURES SHALL BE POURED IN PLACE.
2. DO NOT SCALE THESE DRAWINGS FOR DIMENSIONS OR CLEARANCES. ANY QUESTIONS REGARDING DIMENSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONSTRUCTION.
3. 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. PRECASTER SHALL PROVIDE DESIGN CALCULATIONS FOR DEEP STRUCTURES TO ENGINEER PRIOR TO CONSTRUCTING BOX.

CONCRETE

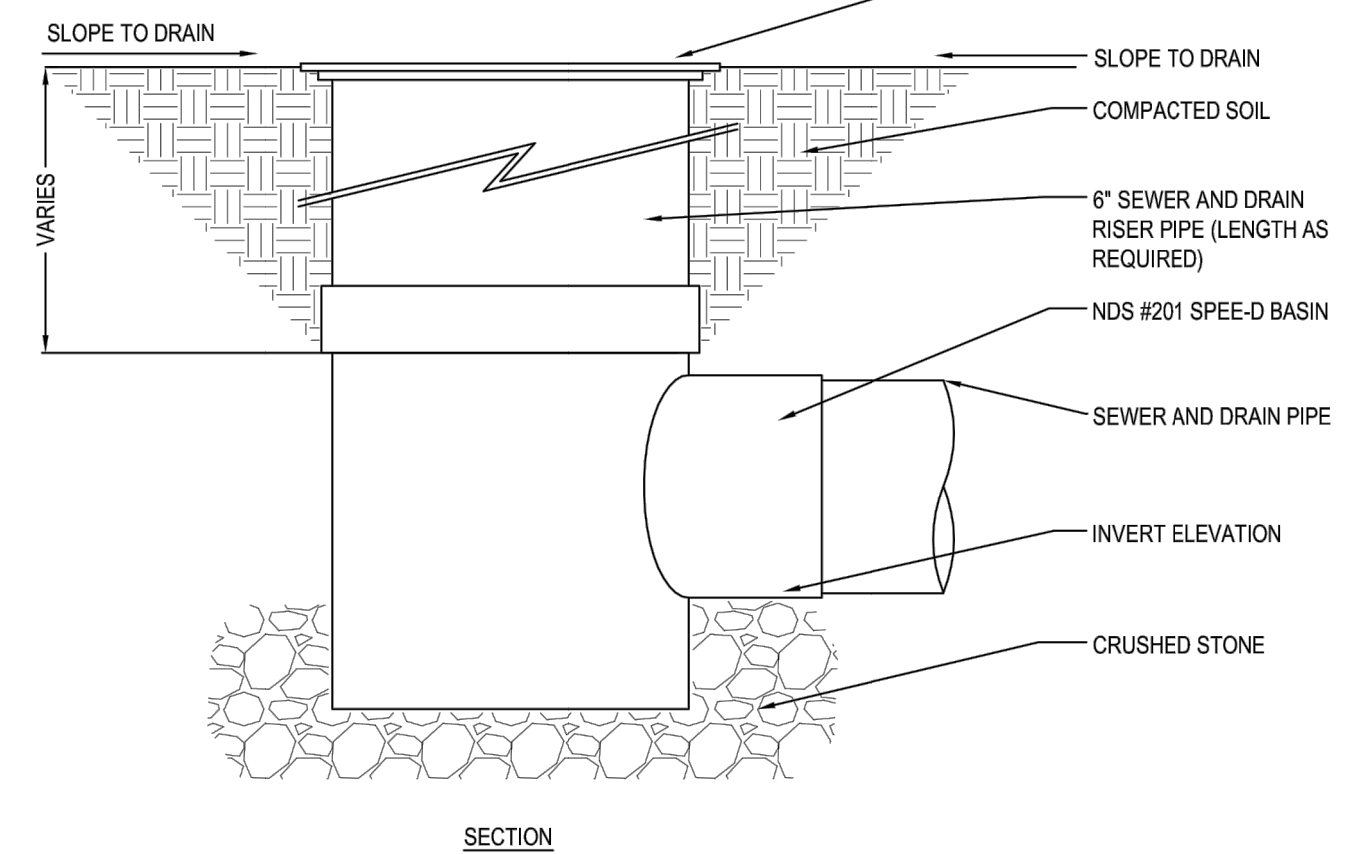
4. CONCRETE USED IN THIS WORK SHALL BE CLASS "A" CONCRETE (AE) THROUGHOUT, AND SHALL MEET THE REQUIREMENTS OF THE KANSAS CITY METROPOLITAN CHAPTER OF THE APWA TECHNICAL SPECIFICATIONS.
5. CONCRETE CONSTRUCTION SHALL MEET THE APPLICABLE REQUIREMENTS OF STANDARD SPECIFICATIONS FOR MOB, LATEST EDITION, EXCEPT AS MODIFIED IN THE APWA TECHNICAL SPECIFICATIONS.
6. INLET FLOORS SHALL BE SHAPED WITH NON-REINFORCED CONCRETE INVERTS TO PROVIDE SMOOTH FLOW.
7. BEVEL ALL EXPOSED EDGES WITH 3/4" TRIANGULAR MOLDING.
8. 8" SOLID CONCRETE BLOCK OR BRICK MAY BE USED IN WALLS IN LIEU OF POURED CONCRETE WHERE NEITHER "H" + "L" NOR "H" + "W" (IN FEET) EXCEED FOURTEEN. BLOCK OR BRICK MAY BE USED IN ANY BOX WHERE "H" IS 5' OR LESS.
9. ALL CRUSHED STONE USED AS AGGREGATE FOR CONCRETE CONSTRUCTION SHALL BE OBTAINED FROM QUARRIES AND BEDS DESIGNATED BY THE MISSOURI DEPARTMENT OF TRANSPORTATION AS MEETING DURABILITY REQUIREMENTS OF KANSAS CITY METROPOLITAN CHAPTER OF THE APWA TECHNICAL SPECIFICATIONS.

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 +/- 3/8" SHALL BE PERMITTED.
12. ALL LAP SPICES 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.
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. MATERIAL SELECTION AND COMPACTION REQUIREMENTS FOR BACKFILL AROUND STRUCTURES SHALL BE AS SPECIFIED IN THE KANSAS CITY METROPOLITAN CHAPTER OF THE APWA TECHNICAL SPECIFICATIONS.



NDS, INC.
851 NORTH HARVARD AVE.
LINDSAY, CA 93247
TOLL FREE: 1-800-726-1994
PHONE: (559) 562-9888
FAX: (559) 562-4488
www.ndspro.com



- NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
 2. DO NOT SCALE DRAWING.
 3. THIS DRAWING IS INTENDED FOR USE BY ARCHITECTS, ENGINEERS, CONTRACTORS, CONSULTANTS AND DESIGN PROFESSIONALS FOR PLANNING PURPOSES ONLY.
 4. ALL INFORMATION CONTAINED HEREIN WAS CURRENT AT THE TIME OF DEVELOPMENT BUT MUST BE REVIEWED AND APPROVED BY THE PRODUCT MANUFACTURER TO BE CONSIDERED ACCURATE.

ROUND SPEED-D BASINS

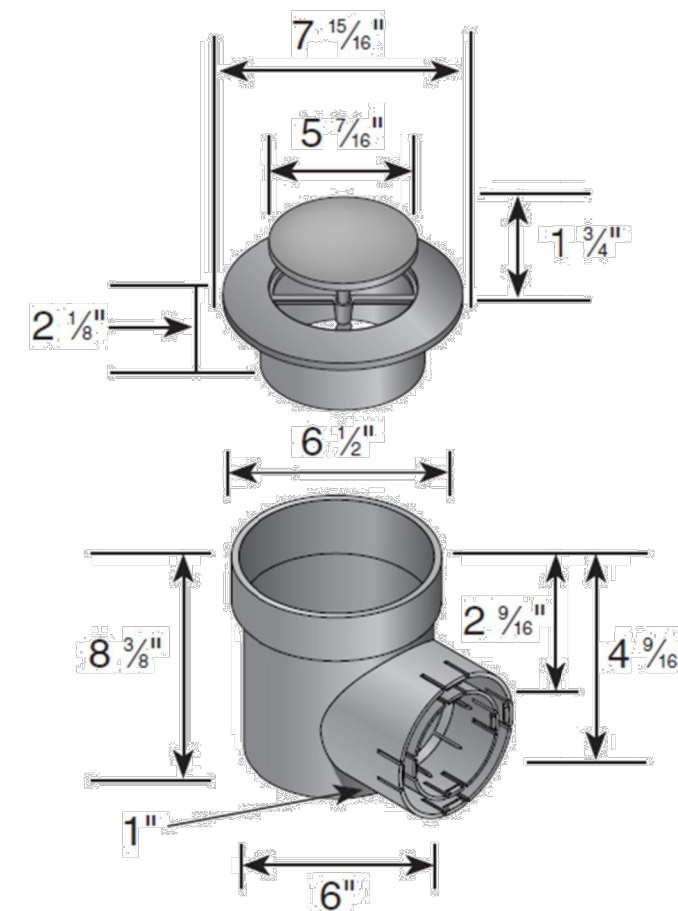
ROUND GRATE WITH SPEED-D BASIN



REVISION DATE 8-24-2015



6 inch Pop Up Emitter with 6 inch Basin



Part #: 625 - Center Spring Loaded
Material: High Density Polypropylene (HDPE)
Colors: Pop Up (Green) Basin (Black)
Fits: 3" and 4" sewer, drain, triple wall, corrugated and sch. 40 pipe
Spring: Stainless Steel Grade 302
Opening Pressure: 1 PSI
Open Surface Area: 28.8 Sq. Inches
Flow Rate:
1" Head: 124.60 GPM
0.5" Head: 88.10 GPM
Basin: 6" NDS Spec-D Basin
Weight Per Each: 2.14 lbs.
UV inhibitor

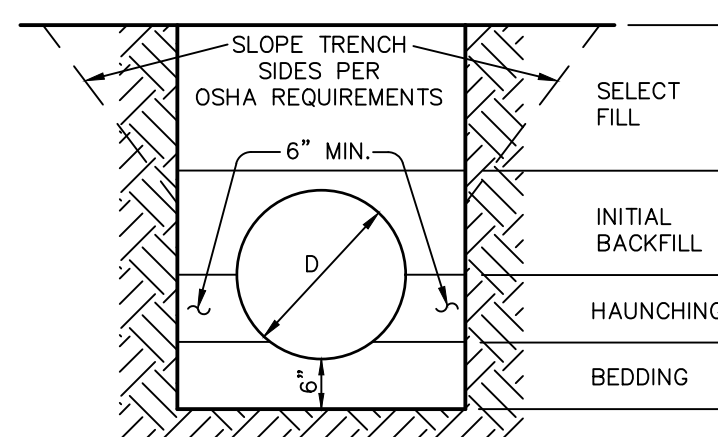
Load Recommendation Guide

- Class A**
- Loads of 1-60 psi.
 - Recommended for pedestrians, bicycles and wheel chair traffic.

310 N. Harvard Avenue Lindsay, CA 93247 800-726-1994	Visit ndspro.com for specs, detail drawings, and case studies	NDS WE PUT WATER IN ITS PLACE
------------------------------------------------------------	-----------------------------------------------------------------------------------------------	-----------------------------------------

POP-UP EMITTER

434



FLEXIBLE PIPE, INCLUDES CORRUGATED METAL PIPE, CORRUGATED POLYETHYLENE PIPE AND/OR POLYVINYL CHLORIDE PIPE.

1. BEDDING SHALL BE COMPACTED CRUSHED STONE AND SHALL BE SHAPED TO THE BOTTOM OF THE PIPE.
2. HAUNCHING AND INITIAL BACKFILL MATERIAL SHALL BE CLASS I OR II (REF. ASTM D2321) GRANULAR MATERIAL AND SHALL BE COMPACTED TO 95% STANDARD PROCTOR.

TRENCH AND BEDDING DETAILS

REFER TO KANSAS CITY METROPOLITAN CHAPTER OF APWA SPECIFICATIONS SECTION 2102.4

kansas city • lawrence • new orleans
phoenix • san francisco

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Lee's Summit R7 District Athletics Facilities

Lee's Summit High School
400 SE Blue Parkway
Lee's Summit, MO 64063

owner:
Lee's Summit R-7 School District
301 NE Tudor Road
Lee's Summit, MO 64086

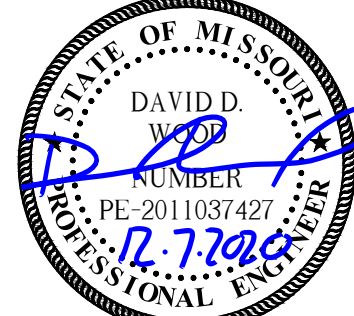
architect:
Gould Evans
4200 Pennsylvania Avenue
Kansas City, MO 64111
816.931.6655 voice
www.goulddevans.com

structural engineer:
Bob D. Campbell & Company, Inc.
4338 Bellevue
Kansas City, MO 64111
816.531.4144

civil engineer:
Kaw Valley Engineering
14700 West 114th Terrace
Lenexa, KS 66215
913.485.0318

mechanical/electrical engineer:
Henderson Engineers
1801 Main St
Kansas City, MO 64108
816.663.5700

UNLESS A PROFESSIONAL SEAL WITH SIGNATURE AND DATE IS AFFIXED, THIS DOCUMENT IS PRELIMINARY AND IS NOT INTENDED FOR CONSTRUCTION, RECORDING PURPOSES OR IMPLEMENTATION



Kaw Valley Engineering, Inc.
Missouri Certificate of Authority: 000842
David Wood Date: 09/28/2020
Engineer License No. PE-2011037427

REVISIONS

Number	DESCRIPTION	DATE
1	Addendum 1	10/13/20
2	Addendum 2	10/23/20
3	PRO05	12/07/20

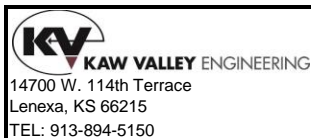
PROJECT NO: 0119-0100
DATE: SEPTEMBER 28, 2020

STORM DETAILS

H-C690

BID SET

PROJ. NO. C20_0496 DSN: DDW DAVID D. WOOD
CFN: 0496DET.DWG DWN: NJN ENGINEER
MO # 2011037427
14700 WEST 114TH TERRACE
LENEXA, KANSAS 66215
PH. (913) 894-5150 / FAX (913) 894-5977
www.kveng.com
KV KAW VALLEY ENGINEERING
KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 000842. EXPIRES 12/31/21



Job: Lee's Summit High School Athletics
Calculated By: David Wood
Checked By:
Title: Engineer's Preliminary Estimate of Probable Construction Cost
No.: C20D0496
Date: 12/7/2020

This ENGINEER'S opinion of probable construction cost is made on the basis of ENGINEER'S experience and qualifications and represents the ENGINEER'S best judgment as an experienced and qualified professional generally familiar with the industry. However, since the ENGINEER has no control over the cost of labor, materials, equipment, or services furnished by others, or over the Contractor's methods of determining prices, or over competitive bidding or market conditions, ENGINEER cannot and does not guarantee that proposals, bids, or actual construction cost will not vary from opinions of probable construction cost as prepared by ENGINEER. If OWNER wishes greater assurance as to probable construction costs, OWNER shall employ an independent cost estimator or contractor.

Lee's Summit HS Athletics - DCM Related Infrastructure

No.	Description	Unit	Quantity	Unit Price	Total	Notes:
1	Erosion Control	AC	1.20	\$ 3,500.00	\$ 4,200.00	
2	Mass Grading (Cut/Fill)	CY	300	\$ 6.00	\$ 1,800.00	
3	Subgrade Preparation	SY	3,600	\$ 5.00	\$ 18,000.00	
4	6" Compacted Aggregate Base	SY	340	\$ 6.75	\$ 2,295.00	\$20/Ton - 150 pcf
5	Concrete Paving (8")	SY	200	\$ 90.00	\$ 18,000.00	\$10.00 per SF - KCCMB No Reinforcement
5	Curb and Gutter (CG-1)	LF	420	\$ 22.50	\$ 9,450.00	
6	Concrete Sidewalk/Ramps (4" on Rock)	SF	29,365	\$ 6.25	\$ 183,531.25	
7	Storm Sewer Structures Concrete	EA	1	\$ 4,000.00	\$ 4,000.00	
8	Storm Sewer Structures PVC	EA	5	\$ 1,500.00	\$ 7,500.00	
9	12" HDPE	LF	445	\$ 45.00	\$ 20,025.00	
10	Sanitary Service Line	LF	136	\$ 40.00	\$ 5,440.00	
11	4" Domestic Service Line with Valves/Fittings	LF	90	\$ 50.00	\$ 4,500.00	
Construction Estimate Total For City Inspection Items					\$ 278,741.25	

