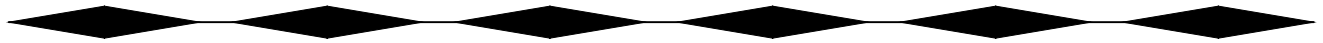




CITY OF JOSEPHINE, TEXAS STANDARD CONSTRUCTION DETAILS



ADOPTED: APRIL 12, 2021



118 McKinney St. • P.O. Box 606 • Farmersville, Texas 75442
Tel: 972.784.7777
(TXENG FIRM F-1114)

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF JOSEPHINE, AND THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS (NCTCOG) STANDARD SPECIFICATIONS FOR THE PUBLIC WORKS CONSTRUCTION OR AS AMENDED.
2. WATER LINES SHALL BE INSTALLED IN ACCORDANCE WITH TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) WATER DISTRIBUTION SYSTEM GENERAL CONSTRUCTION NOTES
3. WATER LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING DANIEL & BROWN, INC. SPECIFICATIONS : 205-WATER LINE INSTALLATION, 201-EARTHWORK, 1002-TRENCH EXCAVATION SAFETY SYSTEMS UNLESS OTHERWISE NOTED IN THESE PLANS.

MATERIALS:

1. ALL VALVES ON PIPES 12" AND SMALLER SHALL BE RESILIENT SEALED WEDGE VALVES (AWWA C509).
2. ALL VALVES SHALL BE CI MJ RW SQUARE HEAD UNLESS OTHERWISE NOTED.
3. LOCATOR WIRE SHALL BE DESIGNED IN ACCORDANCE WITH DANIEL & BROWN, INC. SPECIFICATION 205, WATER LINE INSTALLATION
4. TO THE EXTENT POSSIBLE, ALL PARTS SHALL BE FORD BRAND.
5. ALL TAPPING SLEEVES SHALL BE STAINLESS STEEL FULL WRAP. (SMITH BLAIR 663 OR APPROVED EQUIVALENT)
6. ALL TAPPING SADDLES SHALL BE DOUBLE STRAP BRONZE.
7. SAND EMBEDMENT FOR WATER LINES SHALL BE AS SHOWN IN THE PLANS. BACKFILL WITHIN THE LIMITS OF EXISTING AND PROPOSED PAVEMENT SHALL BE COMPACTED TO 95% STANDARD PROCTOR. BACKFILL OUTSIDE THE LIMITS OF EXISTING AND PROPOSED PAVEMENT SHALL BE COMPACTED TO MINIMUM OF 92% STANDARD PROCTOR. ALL COMPACTION SHALL BE BY MECHANICAL METHODS.
8. PIPES 12" IN DIAMETER AND SMALLER SHALL BE POLYVINYL CHLORIDE (P.V.C.) (AWWA C900 DR 18) OR DUCTILE IRON PIPE (D.I.P.) (AWWA C 151 CLASS 50) IF APPROVED. ALL D.I.P. SHALL BE WRAPPED WITH A POLYETHYLENE LINER.
9. ALL 90° PIPE FITTINGS SHALL BE LONG RADIUS BENDS.

TESTING:

1. WATER LINES SHALL BE PRESSURE TESTED IN ACCORDANCE WITH NCTCOG ITEM 506.
2. THE CONTRACTOR SHALL SUPPLY ALL EQUIPMENT NECESSARY TO SUCCESSFULLY CONDUCT ALL WATER TESTS, INCLUDING BUT NOT LIMITED TO, TEST PORTS, SAMPLE CONTAINERS, PUMPS, EXTERNAL WATER LIE, EXTERNAL HOSES, ETC.
3. THE CITY'S REPRESENTATIVE SHALL HAVE THE OPTION TO WITNESS ANY TESTS DONE IN CONNECTION WITH THE PROJECT.
4. ALL THIRD PARTY TEST FACILITIES, USED IN CONNECTION WITH THE PROJECT, WILL BE APPROVED BY THE CITY OR CITY'S REPRESENTATIVE BEFORE THEY ARE UTILIZED.
5. NEW WATER LINES SHALL BE TESTED, DISINFECTED, AND FLUSHED IN ACCORDANCE WITH TCEQ REQUIREMENTS INCLUDING TAKING THE REQUIRED NUMBER OF BACTERIOLOGICAL SAMPLES WHICH INDICATE PROPER DISINFECTION BEFORE THE WATER LINE CAN BE PLACED INTO SERVICE.

INSTALLATION:

1. NO WORK SHALL BE PERFORMED UNLESS DONE IN THE PRESENCE OF THE CITY'S INSPECTOR.
2. WATER LINES MAY NOT BE BACK FILLED UNTIL INSPECTED AND APPROVED BY CITY PERSONNEL OR REPRESENTATIVE.
3. ALL HORIZONTAL AND VERTICAL BENDS SHALL BE BLOCKED.
4. ALL VALVES AND FITTINGS SHALL BE PROPERLY RESTRAINED WITH MEGA-LUGS OR APPROVED EQUIVALENT.
5. WATER LINES SHALL BE INSTALLED WITH A MINIMUM OF 42 INCHES AND A MAXIMUM OF 60 INCHES OF COVER, UNLESS OTHERWISE SHOWN.
6. WATER LINES AND/OR ROAD CROSSINGS WHICH MAY BE INSTALLED ON PUBLIC RIGHT OF WAYS SHALL BE SUBJECT TO APPLICABLE STATE, COUNTY OR CITY REGULATIONS. ROAD CROSSINGS SHALL BE ENCASED ACCORDING TO STATE, COUNTY OR CITY REGULATIONS.
7. EXISTING WATER LINES SHALL REMAIN IN SERVICE DURING CONSTRUCTION OF NEW WATER LINES.
8. THE WATER LINE MATERIALS AND INSTALLATION SHALL BE GUARANTEED BY THE CONTRACTOR FOR A MINIMUM PERIOD OF TWO YEARS FROM THE DATE OF FINAL ACCEPTANCE. A 2 YEAR MAINTENANCE BOND IS REQUIRED.
9. NO FLARE JOINT CONNECTIONS ARE ALLOWED.
10. WATER LINE STAKING AND ELEVATION IS THE RESPONSIBILITY OF THE CONTRACTOR.
11. ALL WATER LINE CROSSINGS OF SANITARY SEWER LINES SHALL BE AS SHOWN IN THE PLANS AND MEET TCEQ REQUIREMENTS.
12. WATER LINES, CROSSING BENEATH THE PROPOSED ROADWAY SURFACE, SHALL MAINTAIN A MINIMUM CLEARANCE OF 18 INCHES BETWEEN THE BOTTOM OF THE PAVEMENT STRUCTURE AND TOP OF PIPE.
13. CONTRACTOR SHALL FINISH GRADE TRENCH LINE TO MATCH EXISTING TERRAIN.

SHEET 1

STANDARD DETAILS
FOR
CITY OF JOSEPHINE
COLLIN & HUNT COUNTIES, TEXAS



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DRAWN: M.K.W.	REVISION: 04/08/2021
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GENERAL NOTES (1)

BORINGS:

1. STEEL CASING SHALL BE INSTALLED UNDER STATE ROADS & PVC CASING UNDER COUNTY/CITY ROADS UNLESS OTHERWISE SHOWN ON PLANS.
2. ROAD CROSSINGS SHALL BE ENCASED ACCORDING TO STATE, COUNTY OR CITY REGULATIONS.
3. CASING SPACERS AND END CAPS ARE REQUIRED. CASING SPACERS SHALL BE INSTALLED AT LEAST EVERY 8 FEET AND FOR WATERLINES EQUAL TO OR GREATER THAN 2 INCHES.
4. A ROAD BORE PERMIT MUST BE DISPLAYED AND AVAILABLE FOR INSPECTION AS REQUIRED.
5. 8" AND LARGER ROAD BORES SHALL BE DRY BORE.
6. ALL BORE PITS OR OPEN EXCAVATION SHALL BE CLOSED THE SAME DAY THEY ARE OPENED IF AT ALL POSSIBLE. ANY PIT OR EXCAVATION LEFT OPEN OVERNIGHT SHALL BE BARRICADED. TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) RULES AND REGULATIONS SHALL APPLY FOR STATE RIGHT OF WAY APPLICATIONS.
7. BORE PIT EDGES SHALL BE AT LEAST 1-FT HORIZONTAL PER 1-FT VERTICAL DEPTH AWAY FROM THE EXISTING ROADWAY SHOULDER'S EDGE.
8. BORINGS SHALL HAVE A MINIMUM COVER OF 2-FT VERTICALLY BELOW THE EXISTING DITCH FLOW LINE.

METERS AND VAULTS:

1. NOTIFY THE OWNER PRIOR TO CONSTRUCTION OF METER VAULT OR BY-PASS ASSEMBLY.
2. THE VAULT SHALL NOT BE INSTALLED IN ANY DRIVE OR PARKING AREA & MUST BE LOCATED IN A UTILITY EASEMENT DEDICATED TO THE OWNER.
3. ALL PIPING INSIDE THE VAULT & THE VAULT ITSELF MUST BE INSPECTED & APPROVED BY THE OWNER.
4. THE VAULT LID/DOOR SHALL BE CONCRETE, OPTIONALLY THE VAULT LID MAY BE ALUMINUM.
5. ALL PIPING INSIDE THE VAULT SHALL BE DUCTILE IRON PIPE WITH FLANGED FITTINGS.
6. THERE WILL BE A CONCRETE SUPPORT UNDER EACH GATE VALVE.
7. CONTRACTOR SHALL PROVIDE ALL METER SETTINGS. OWNER SHALL PROVIDE WATER METERS, UNLESS OTHERWISE SHOWN ON PLANS.

OTHER UTILITIES:

1. ALL EXISTING UTILITIES SHALL BE LOCATED, IDENTIFIED, AND PROTECTED DURING THE INSTALLATION OF NEW WATER LINES.
2. WATERLINE ENCASEMENT FOR THE PURPOSES OF A GAS LINE CROSSING SHALL BE IN ACCORDANCE WITH GAS LINE OWNER'S SPECIFICATIONS.
3. DURING INSTALLATION TCEQ SEPARATION DISTANCES SHALL BE MAINTAINED IN ALL DIRECTIONS BETWEEN THE PROPOSED WATERLINE AND WASTE WATER FACILITIES.

TRAFFIC:

1. TRAFFIC CONTROL SIGNAGE, BARRICADES, ETC., PER THE LATEST EDITION TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES SHALL REMAIN IN PLACE DURING CONSTRUCTION.
2. PROPER TRAFFIC CONTROL MEASURES SHALL BE MAINTAINED FOR DURATION OF CONSTRUCTION AS PRESCRIBED BY THE TEXAS DEPARTMENT OF TRANSPORTATION PERSONNEL. (REF. TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES) THE CONTRACTOR OR OWNER SHALL PROVIDE BARRICADES, WARNING SIGNS, AND FLAGGERS WHEN APPLICABLE.
3. OPERATIONS ALONG HIGHWAYS SHALL BE PERFORMED IN SUCH MANNER THAT ALL EXCAVATED MATERIAL, ALL OPERATING EQUIPMENT, AS WELL AS PARKED VEHICLES, ARE KEPT OFF THE PAVEMENT AT ALL TIMES. ANY VEHICLES REQUIRED TO REMAIN ON THE ROADWAY, INCLUDING SHOULDERS, ARE TO BE PROPERLY BARRICADED ACCORDING TO THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
4. CONSTRUCTION OPERATIONS SHALL BE SUSPENDED DURING WET CONDITIONS, WHEN IN THE CITY, COUNTY, OR STATE'S OPINION, DAMAGE TO THE RIGHT-OF-WAY COULD OCCUR OR WHEN SAFETY TO THE TRAVELING PUBLIC IS AN ISSUE.

EROSION CONTROL:

1. PROPER EROSION CONTROL MEASURES SHALL CONSIST OF THE INSTALLATION, MAINTENANCE, AND REMOVAL OF THE SILT FENCING, STRAW BALES, INLET SEDIMENT BARRIERS, ETC., INCLUDING ANY SEEDING (CELLULOSE FIBER MULCH) OF DISTURBED GRASS; SUCH MEASURES SHALL REMAIN IN PLACE AND WATERED SUFFICIENTLY UNTIL 70% RE-VEGETATION OF AN DISTURBED AREAS HAS BEEN ESTABLISHED.
2. REMOVED TOPSOIL IS TO BE PLACED BACK AS THE SURFACE LAYER WHEN BACKFILLING TRENCHES.

MISCELLANEOUS:

1. ALL WATER, USED BY THE CONTRACTOR FOR ANY PURPOSE, SHALL BE METERED UNLESS OTHERWISE SPECIFIED. METER SHALL BE SUPPLIED BY THE CITY OF JOSEPHINE AT COST.
2. THE CITY OF JOSEPHINE SHALL BE HELD HARMLESS FROM ANY DAMAGES OCCURRING DURING THE CONSTRUCTION OR WARRANTY PERIOD. ALL DAMAGES AS A RESULT OF THE CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
3. THE CONTRACTOR IS RESPONSIBLE TO PICK UP ALL TRASH AND TO KEEP THE JOB SITE FREE FROM TRASH & DEBRIS ON A DAILY BASIS.
4. ALL CONSTRUCTED WATERLINE ROUTES SHALL BE PROPERLY LEVELED AND MAINTAINED FOR ONE YEAR.
5. ALL CONSTRUCTION ACTIVITIES, VEHICLES, EQUIPMENT AND MATERIALS SHALL BE KEPT WITHIN THE EASEMENT BOUNDARIES.
6. FOR PROPERTIES THAT HAVE AGRICULTURAL/LIESTOCK ACTIVITIES, THE CONTRACTOR AND OWNER'S REPRESENTATIVE SHALL COORDINATE WITH THE APPROPRIATE PARTIES BEFORE ENTERING THE PROPERTY.

SITE PREPARATION:

1. SITE SHALL BE GRADED TO DRAIN WITH NO PUDDLING.
2. ALL GRADED AREAS SHALL BE SEEDED WITH BERMUDA GRASS OR OTHER SEASONAL GRASSES, IN ACCORDANCE WITH DANIEL & BROWN INC. SPECIFICATION 203 - SEEDING, UPON COMPLETION OF FINAL GRADING.
3. EXCAVATION MATERIAL MAY BE SPREAD OUT ON SITE AS DIRECTED BY THE OWNER OR ENGINEER.
4. FOR PROJECTS, ANY EXCAVATION IN CLOSE PROXIMITY TO THE CURB AND GUTTER SHALL NOT BE PERFORMED UNTIL THE TEXAS DEPARTMENT OF TRANSPORTATION MAINTENANCE SUPERVISOR HAS BEEN CONTACTED TO DETERMINE IF SHORING IS REQUIRED.
5. FOR PROJECTS, WHERE EXCAVATION OR BACKFILLING OPERATIONS DISTURB SOIL OR SODDING, SUCH AREAS SHALL BE RESTORED TO THE ORIGINAL STATE, IF NOT A BETTER CONDITION. AFTER BACK FILLING, MULCH SODDING, BLOCK SODDING, OR THE ESTABLISHMENT OF VEGETATION THROUGH SEEDING SHALL OCCUR ON ALL SLOPES OF 3 TO 1 OR FLATTER. BROADCAST SEEDING SHOULD BE LIMITED TO FLAT AREAS, WHICH HAVE CLAY OR TIGHT SOIL TEXTURE ONLY. WHERE SLOPES ARE GREATER THAN 3 TO 1, BLOCK SODDING OR USE OF A SOIL RETENTION BLANKET IS REQUIRED. IF A SOIL RETENTION BLANKET IS USED, THE APPLICATION OF SEED UNDER SPECIFICATION ITEM 164 OF THE TEXAS STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS, AND BRIDGES BY THE BROADCAST METHOD IS REQUIRED.

STANDARD DETAILS
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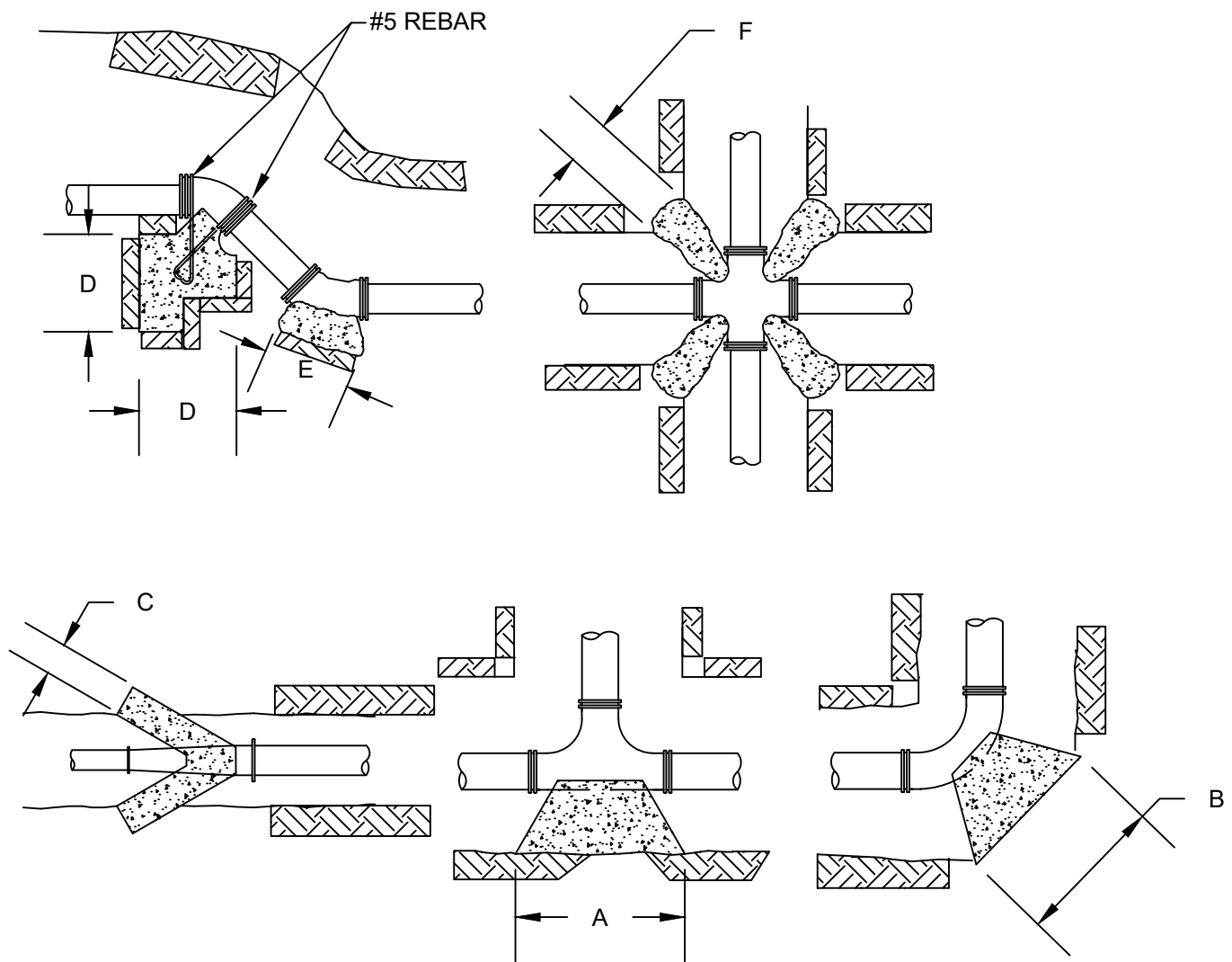
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WATER LINE SPECIFICATIONS

APPLICATION	MATERIAL	DIAMETER	STANDARD	DIMENSION RATIO	PRESSURE RATING	NOTES
Standard Carrier Pipe	PVC	4" to 12"	AWWA Standard C900	DR 18	150 psi	
Standard Carrier Pipe	PVC	14" to 48"	AWWA Standard C905	DR 18	235 psi	
Restrained Joint Carrier Pipe	PVC	4" to 12"	AWWA Standard C900	DR 18	150 psi	Certa-Lok
Restrained Joint Carrier Pipe	PVC	16"	AWWA Standard C905	DR 25	165 psi	Certa-Lok
Restrained Joint Carrier Pipe, UV Protected and High Impact Strength	Yelomine	4" to 12"	AWWA Standard C900	DR 18	150 psi	Certa-Lok, permanent use joints
City/Hunt or Collin County Roadway Crossing Encasement, Open Cut	PVC	18" to 48"	ASTM F679 P5115	SEWER PVC PIPE	115 psi	
City/Hunt or Collin County Roadway Crossing Encasement, Open Cut	PVC	2" to 12"	ASTM D 2241 I.P.S. - O.D.	SDR 26	160 psi	
State Roadway Bore Encasement	Steel	4" to 24"	ASTM A252 Grade 2, Wall Thickness Schedule 40 or 0.375" whichever is less	N/A	N/A	Dry bore >= 8", Min. wall thickness is 0.25 inch
State Roadway Bore Encasement	Steel	2" to 3"	ASTM A 53 Grade A Schedule 40 Black Pipe with Merchant Coupling (Threaded Ends)	N/A	N/A	
City/Hunt or Collin County Roadway Bore Encasement	PVC	18" to 48"	ASTM F679 P5115	SEWER PVC PIPE	115 psi	Dry bore >= 8"
City/Hunt or Collin County Roadway Bore Encasement	PVC	2" to 12"	ASTM D 2241 I.P.S. - O.D.	SDR 26	160 psi	
Railroad Crossing Encasement	Steel	4" to 24"	Use railroad specifications	N/A	N/A	
Creek Crossing Encasement	HDPE	4" to 63"	AWWA Standard C906 I.P.S.	DR 11	160 psi	
Service Line	PE	1"	AWWA Standard C901	SDR 9	200 psi	

NOTE:

1. CARRIER PIPE SHALL BE RESTRAINED JOINT IF ENCASED.
2. ALL EXCEPTIONS TO ABOVE SHALL OBTAIN CITY & ENGINEERS PRIOR APPROVAL.

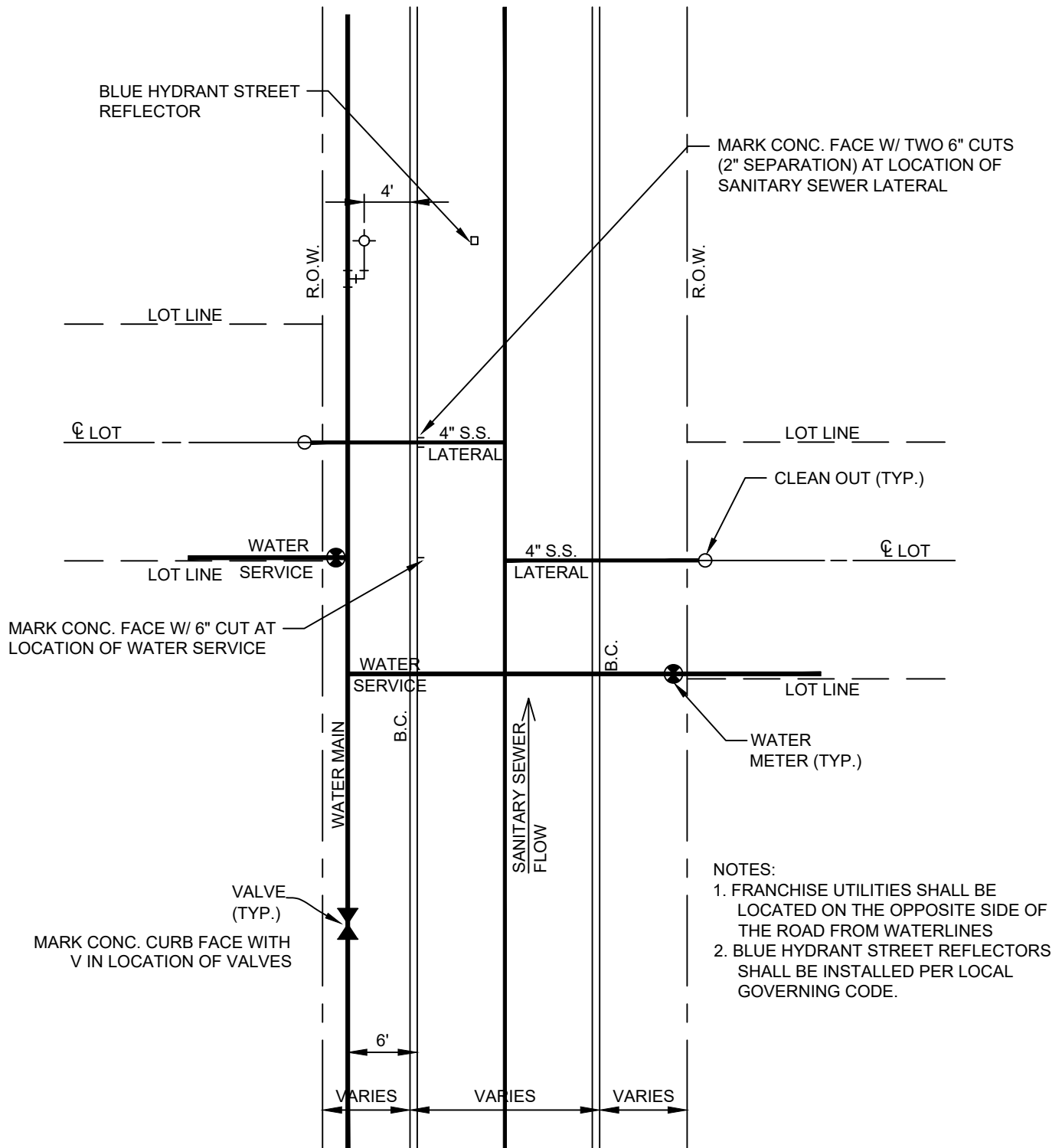


THRUST BLOCK DETAIL

NOTE: ALL BLOCKING SHALL BE TRUCK
POURED. MIXED ON SITE OR BAG CEMENT
WILL NOT BE ACCEPTED.

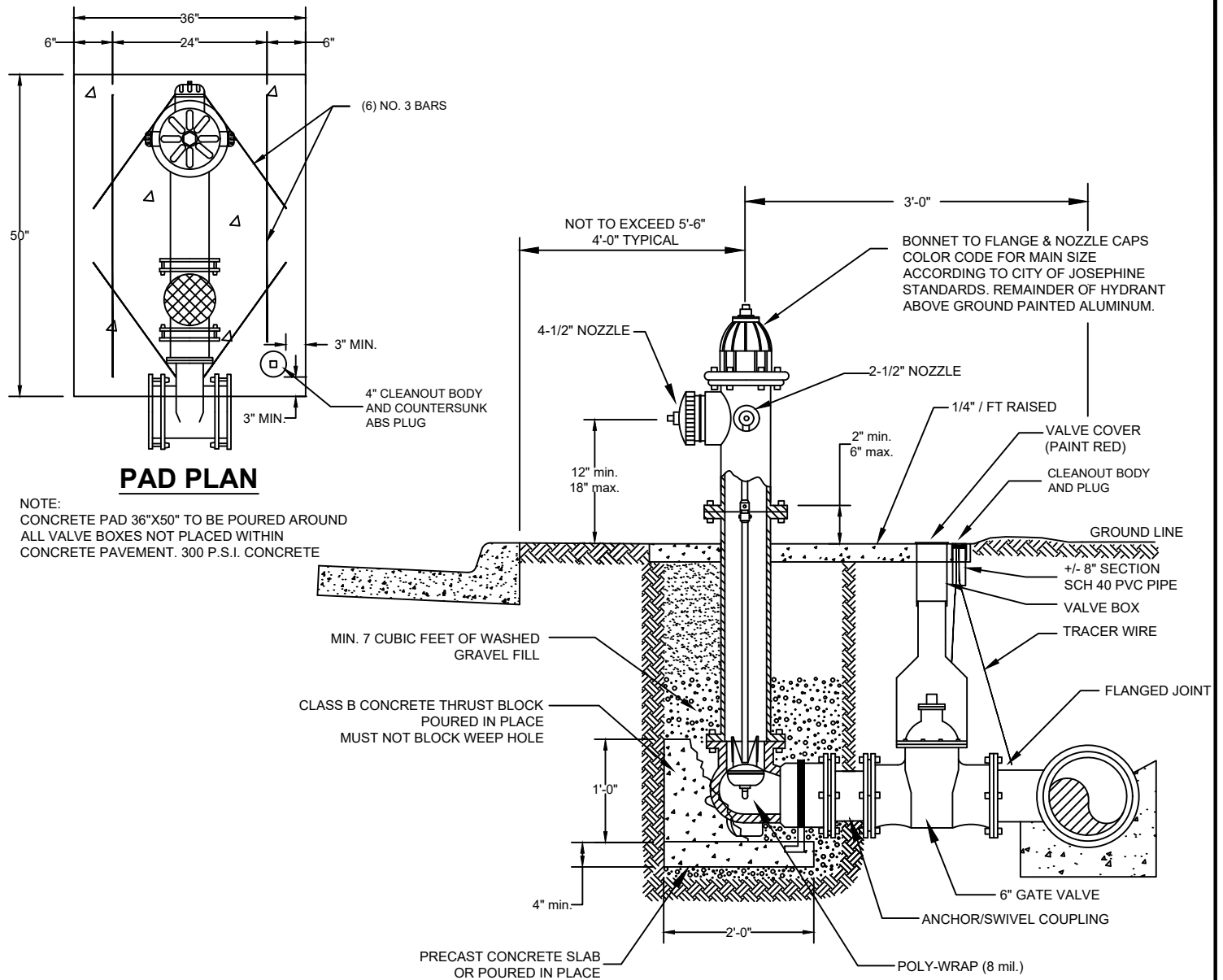
MINIMUM THRUST BLOCK DIMENSIONS

PIPE SIZE	A	B	C	D	E	F
6"	18"	20"	12"	26"	18"	18"
8"	22"	26"	14"	29"	21"	22"
10"	28"	34"	18"	35"	25"	28"
12"	34"	40"	20"	42"	30"	34"



- NOTES:**
1. FRANCHISE UTILITIES SHALL BE LOCATED ON THE OPPOSITE SIDE OF THE ROAD FROM WATERLINES
 2. BLUE HYDRANT STREET REFLECTORS SHALL BE INSTALLED PER LOCAL GOVERNING CODE.

TYPICAL WATER / SANITARY SEWER SERVICE LOCATION



PAD PLAN

NOTE:
CONCRETE PAD 36"x50" TO BE POURED AROUND
ALL VALVE BOXES NOT PLACED WITHIN
CONCRETE PAVEMENT. 300 P.S.I. CONCRETE

FIRE HYDRANT ASSEMBLY INSTALLATION

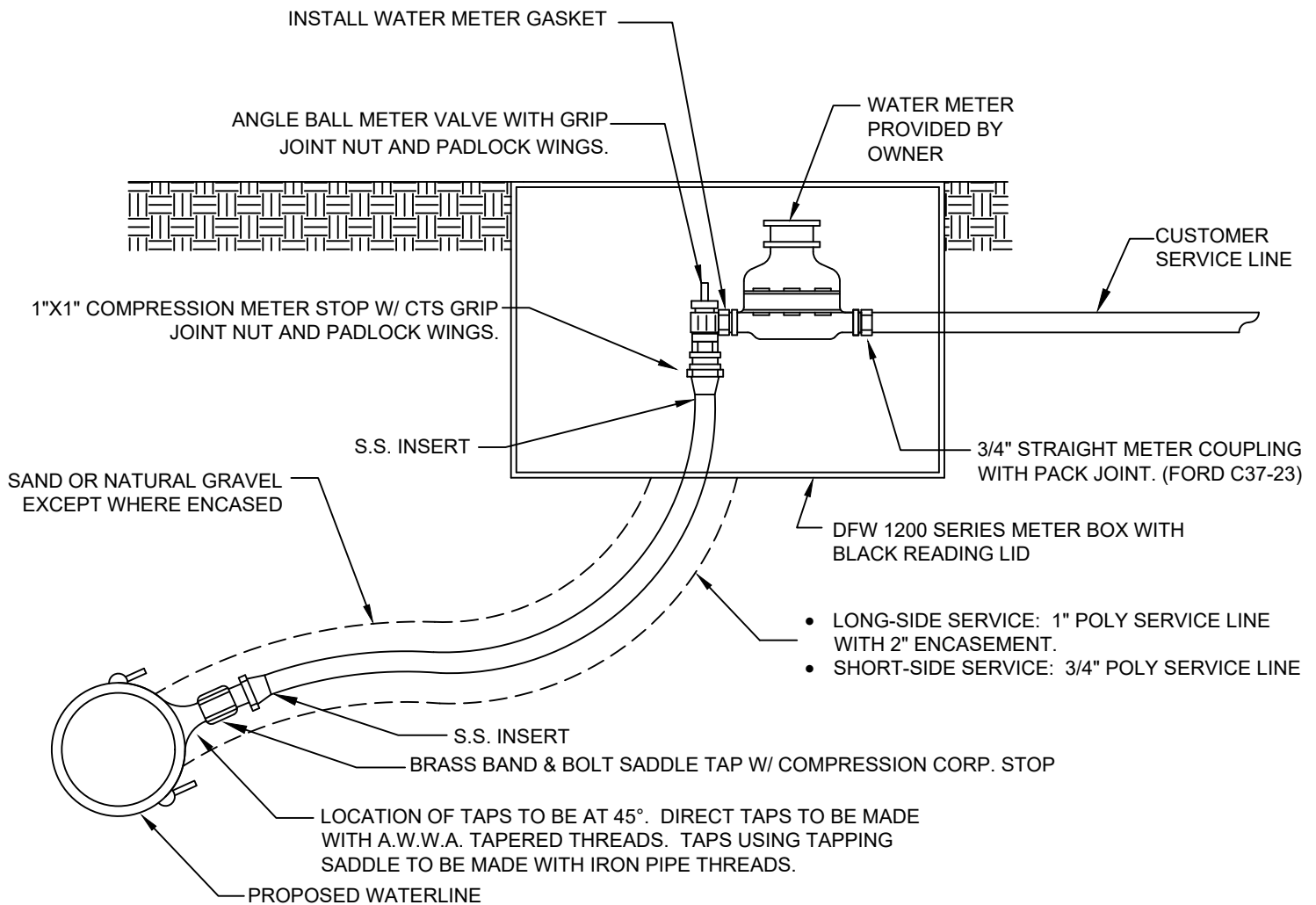
NOTES:

1. ALL FIRE HYDRANTS SHALL CONFORM TO AWWA STANDARD SPECIFICATIONS FOR FIRE HYDRANTS FOR ORDINARY WATER WORKS SERVICE FOR WATER & SANITARY SEWER IMPROVEMENTS.
2. ALL HYDRANTS SHALL BE AVK BRAND. FIRE HYDRANTS SHALL HAVE A 5-1/4" MIN. VALVE OPENING & WITH A BARREL APPROX. 7" INSIDE DIAMETER.
3. ALL FIRE HYDRANTS SHALL BE EQUIPPED WITH A BREAKAWAY FLANGE. NOZZLE SECTION, UPPER & LOWER STAND PIPES & HYDRANTS SHALL BE DUCTILE IRON. THE UPPER BARREL ABOVE GROUND SHALL BE IN TWO SECTIONS TO ALLOW FOR EASY DISASSEMBLY. ALL HYDRANTS SHALL BE APPROVED BY THE DISTRICT.
4. BONNET COLOR

WATER MAIN CAP	COLOR
4"	BLACK
6"	RED
8"	BLUE
10" OR LARGER	YELLOW
5. ALL HYDRANTS SHALL BE INSTALLED WITH A 24"x24" SQUARE REINFORCED CONCRETE PAD.

SERVICE CONNECTION NOTES:

1. ALL METER BOXES SHALL BE DFW 1200.12.1 R OR APPROVED EQUAL.
2. FORD BRASS, OR AS APPROVED.
 - DOUBLE BAND BRASS TAP SADDLE FOR C-900 PIPE
6" x 3/4" PART # 202B 750 IP3
6" x 1" PART # 202B 750 IP4
8" X 3/4" PART # 202B 962 IP3
8" X 1" PART # 202B 962 IP4
 - BRASS CURB STOP
3/4" PART # BA43 232 WGNL
1" PART # BA43 342 WGNL
 - SS INSERTS
3/4" PART # FS1
1" PART # FS2
 - BRASS CORP.
3/4" PART # F1100 3 GNL
1" PART # F1100 4 GNL
3. WATER SERVICES SHALL NOT BE CONNECTED TO FIRE HYDRANT LINES.
4. EMBEDMENT FOR SERVICE LINE SHALL BE 6" SAND ALL AROUND



STANDARD SERVICE TAP INSTALLATION

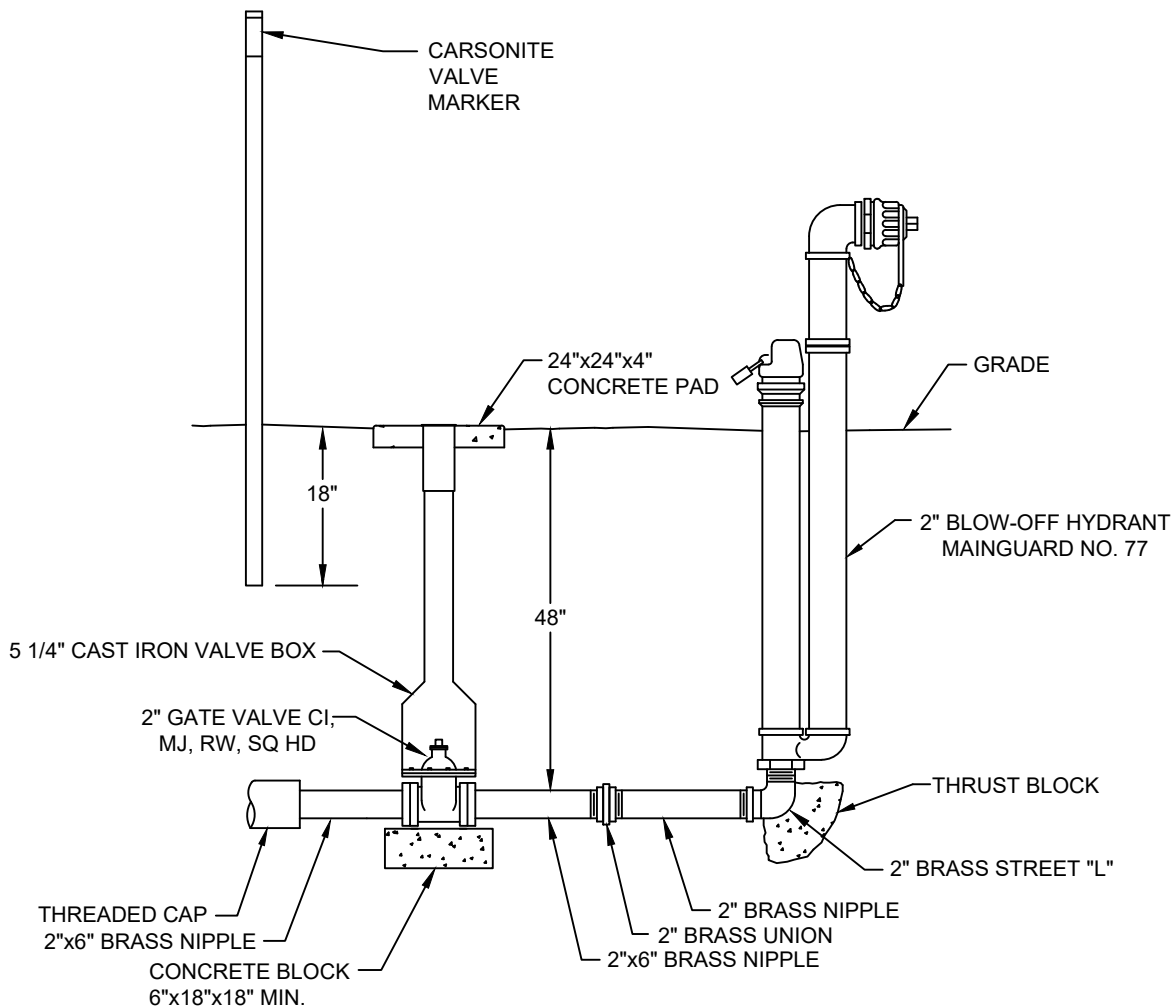
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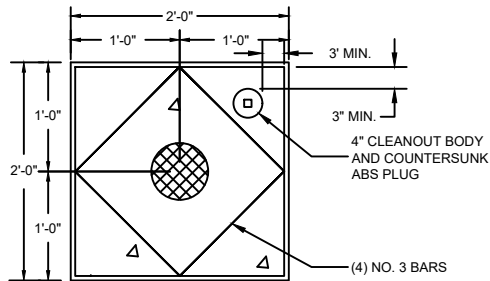
SERVICE TAP DETAIL



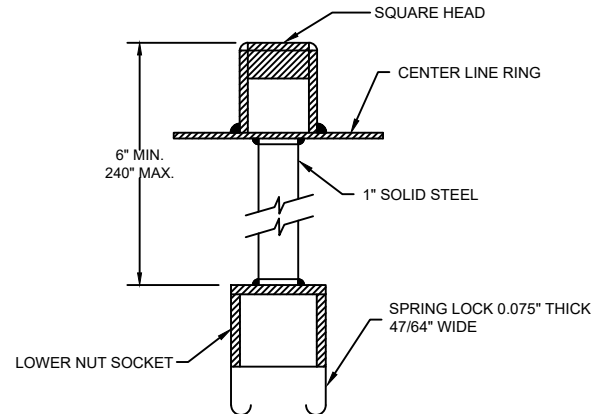
FLUSH HYDRANT ASSEMBLY INSTALLATION

NOTE:

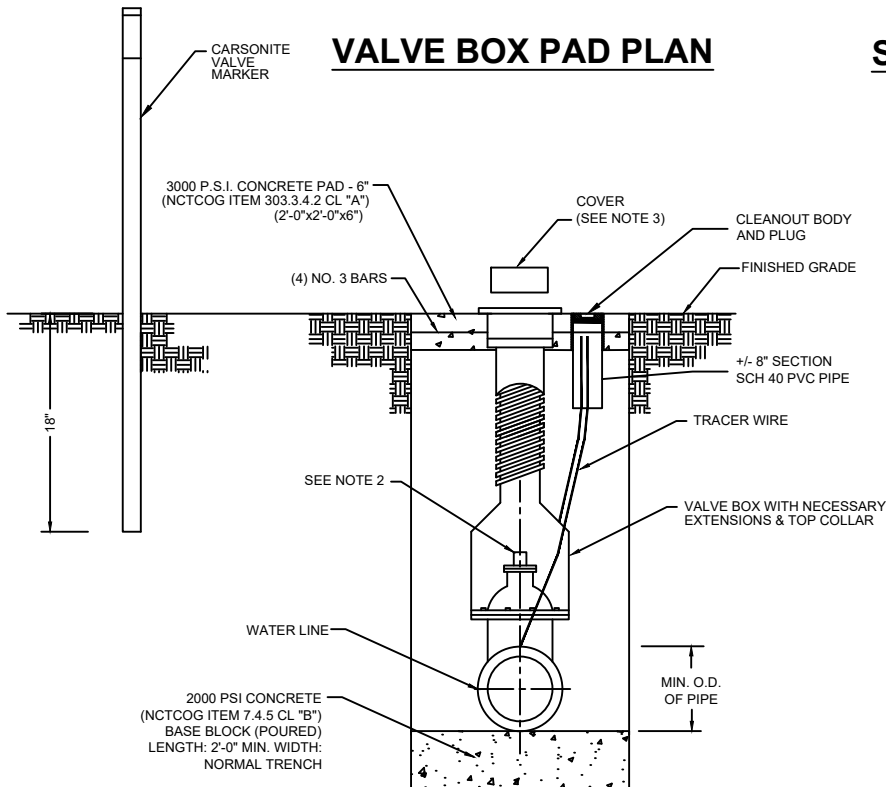
1. 4" TO 12" GATE VALVE SHALL BE RESILIENT SEATED WEDGE IN ACCORDANCE WITH AWWA STANDARD C-515.
2. A PERMANENTLY ATTACHED VALVE EXTENSION STEM SHALL BE REQUIRED FOR ANY VALVE WHOSE OPERATING NUT IS LOCATED IN EXCESS OF 4 FT BELOW THE TOP OF VALVE BOX. THIS EXTENSION SHALL BE OF SUFFICIENT LENGTH TO INSURE THAT ITS TOP IS WITHIN 4" OF THE VALVE BOX COVER.
3. CONCRETE PAD 24" SQUARE TO BE POURED AROUND ALL VALVE BOXES NOT PLACED WITHIN CONCRETE PAVEMENT. 300 P.S.I. CONCRETE
4. COVER COLOR DEPICTIONS:
 - FIRE HYDRANT - RED
 - NORMAL WATER - BLUE
 - DEAD END - WHITE
 - FLUSH VALVE - BLACK
 - SAMPLING STATION - BLACK
 - BLOW OFF VALVE - BLACK



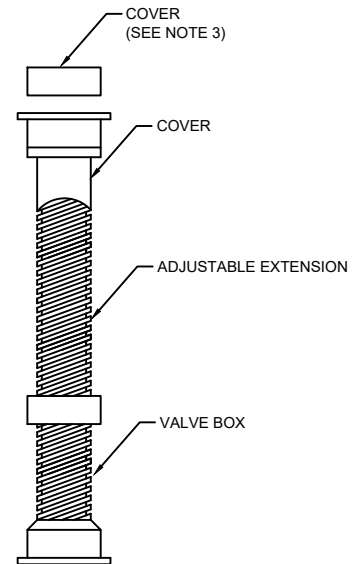
VALVE BOX PAD PLAN



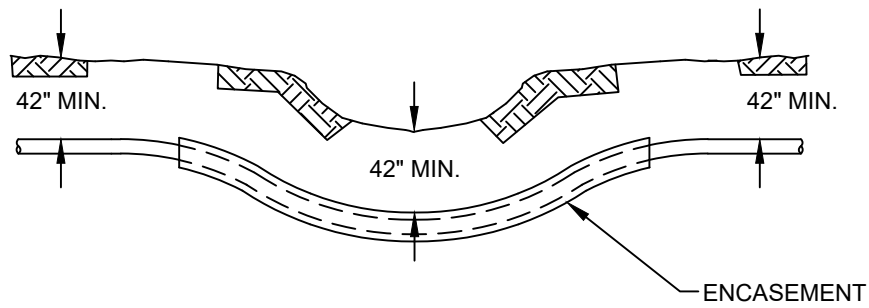
SPRING LOCK VALVE EXTENSION



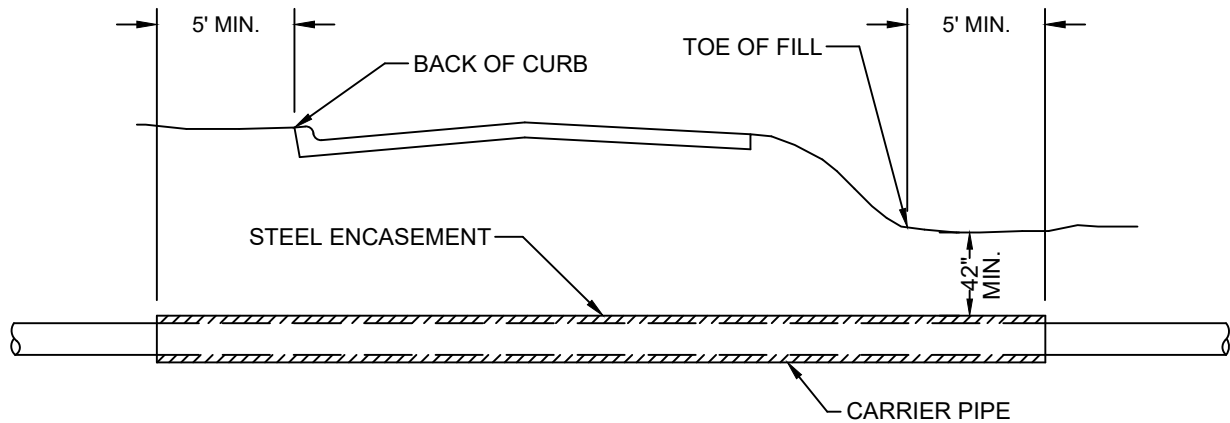
GATE VALVE INSTALLATION



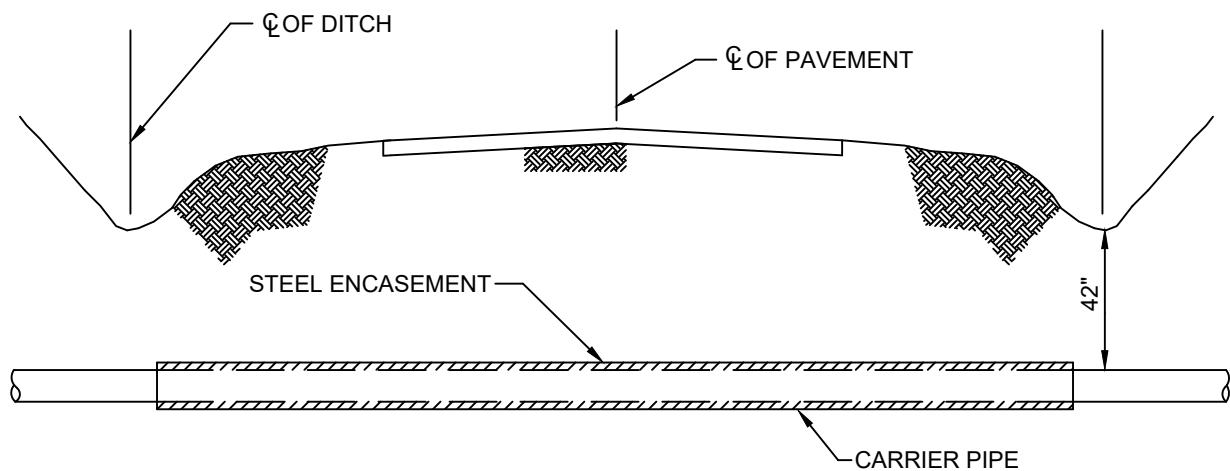
VALVE BOX W/ EXTENSION



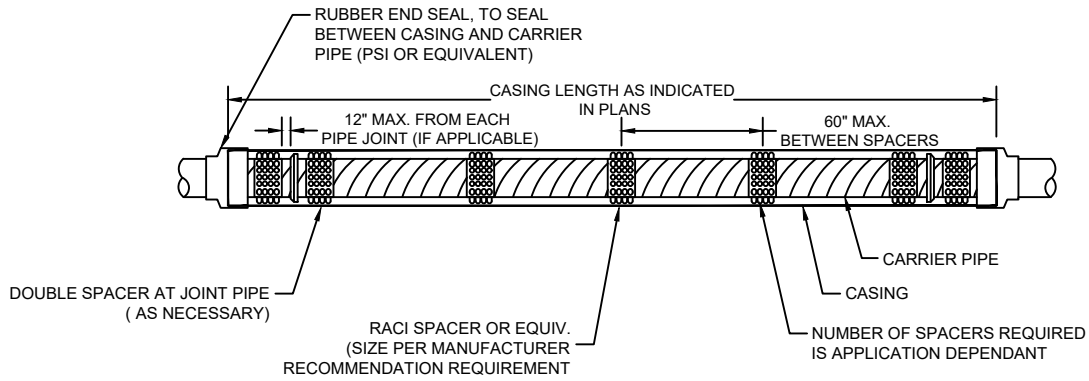
TYPICAL CREEK CROSSING DETAIL



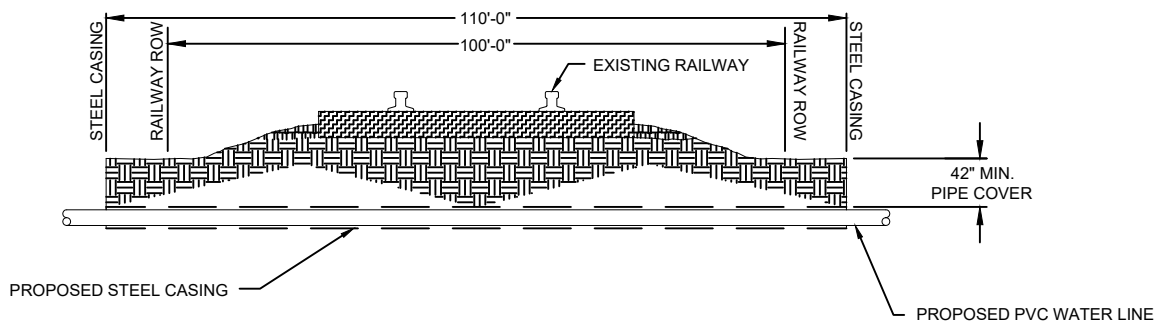
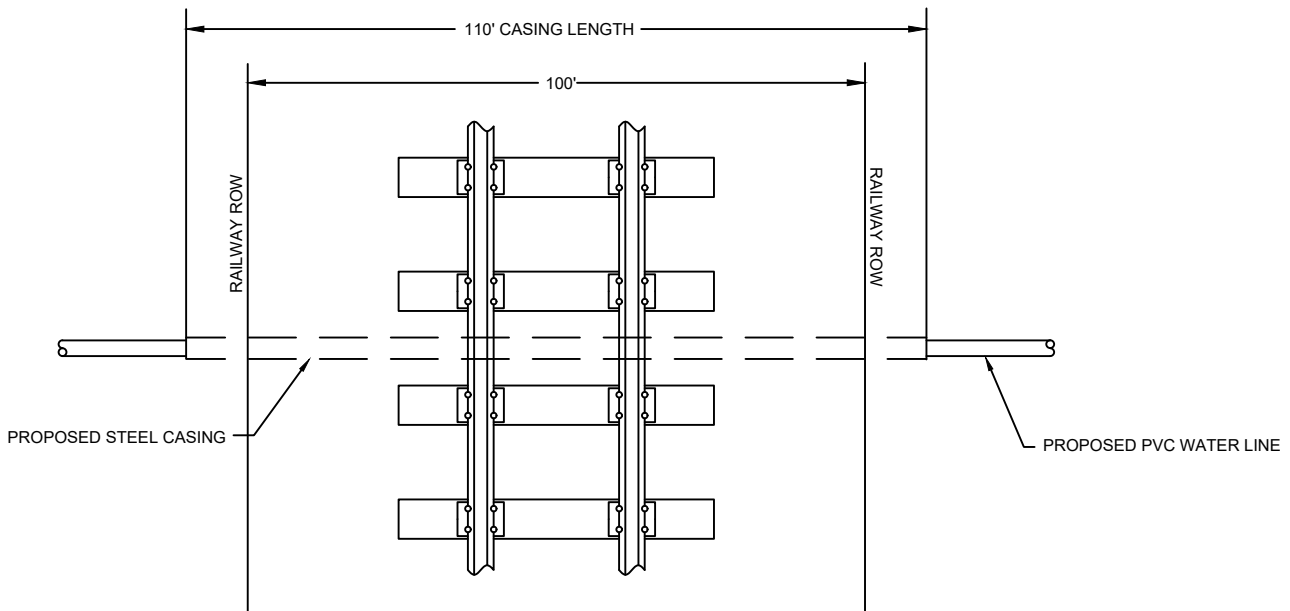
ROAD BORE AND ENCASEMENT DETAIL



ROAD BORE AND ENCASEMENT DETAIL



ENCASED WATERLINE DETAIL



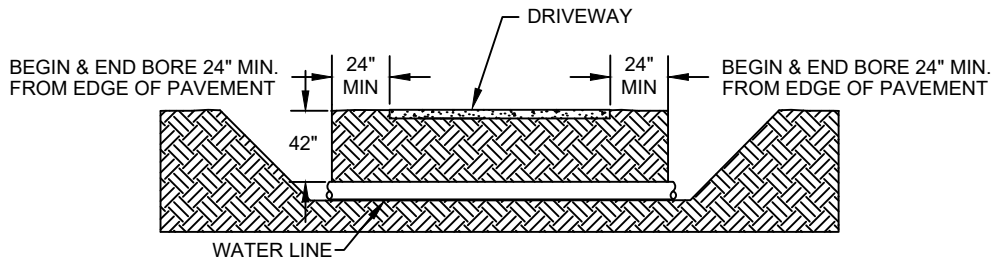
RAILWAY CROSSING DETAIL

NOTES:

- 1) RAILWAY CROSSING SHALL BE DRY BORED.
- 2) CONTRACTOR SHALL BE REQUIRED TO MEET ALL RAILROAD CO. REQUIREMENTS.

NOTES:

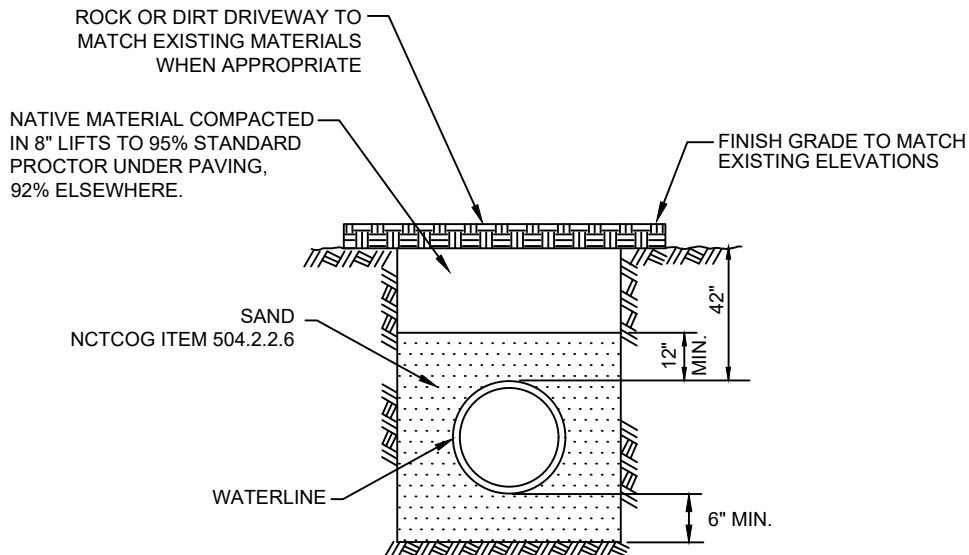
1. SELECT BACKFILL SHALL BE SOIL MATERIAL. ROCK IN SELECT BACKFILL SHALL BE LIMITED TO 2" MAX. DIMENSION.
2. SELECT BACKFILL SHALL BE COMPACTED TO 90% OF STANDARD PROCTOR DENSITY.
3. FINISH GRADE TO MATCH EXISTING ELEVATIONS.
4. CUSTOMER FUNDED TESTING WILL BE PERFORMED ON THIS PROJECT FOR SOIL DENSITY (COMPACTION) AND CONCRETE REQUIREMENTS. IN THE EVENT OF A TEST FAILURE, THE CONTRACTOR SHALL PAY FOR ANY RETEST FEES.



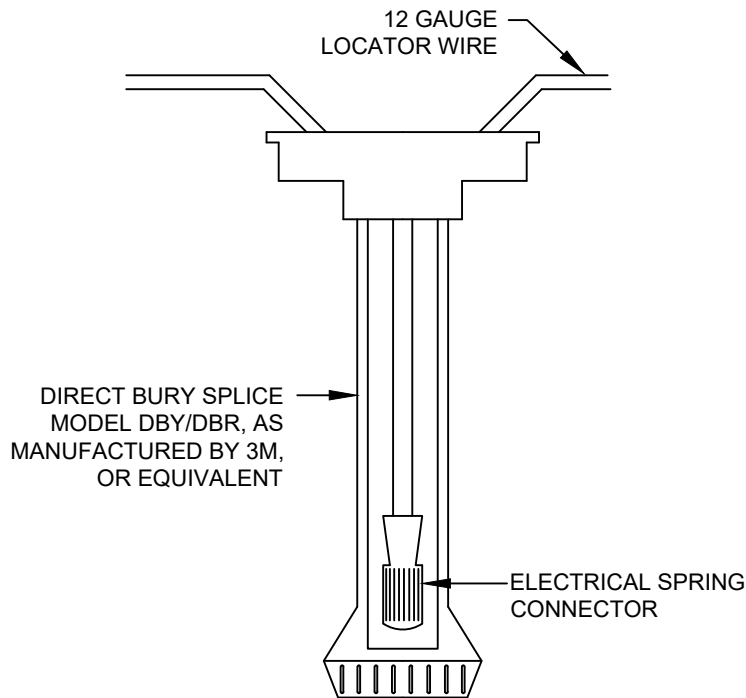
CONCRETE/ASPHALT DRIVEWAY BORE DETAIL

NOTES:

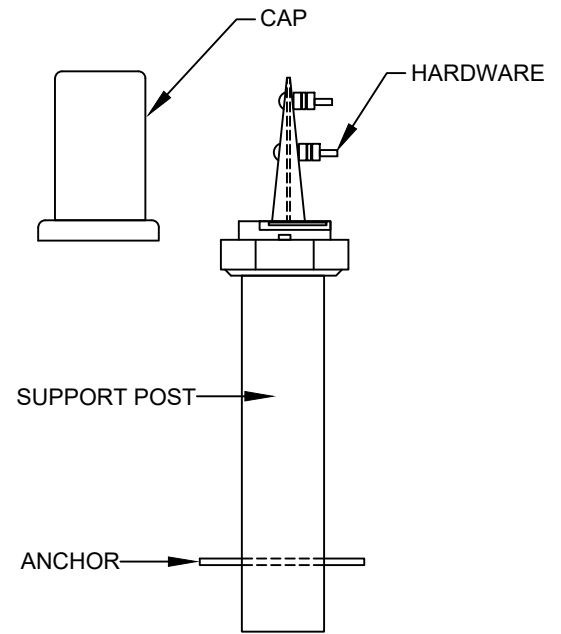
1. SELECT BACKFILL SHALL BE SOIL MATERIAL. ROCK IN SELECT BACKFILL SHALL BE LIMITED TO 2" MAX. DIMENSION.
2. CUSTOMER FUNDED TESTING WILL BE PERFORMED ON PROJECT FOR SOIL DENSITY (COMPACTION) AND CONCRETE REQUIREMENTS. IN THE EVENT OF A TEST FAILURE, THE CONTRACTOR SHALL PAY FOR ANY RETEST FEES. THIS ITEM IS NORMALLY A CONTRACT LINE ITEM.
3. IN CASES WHERE THE WATER LINE EXCEEDS 8 FEET IN DEPTH DUE TO TERRAIN CHANGES, OR IN CASES WHERE THE GROUND IS A CONCENTRATED DRAINAGE AREA, NATURAL STONE LESS THAN SIEVE SIZE OF 3/4" SHALL BE USED IN PLACE OF SAND.



OPEN CUT ROCK/DIRT DRIVEWAY CROSSING DETAIL



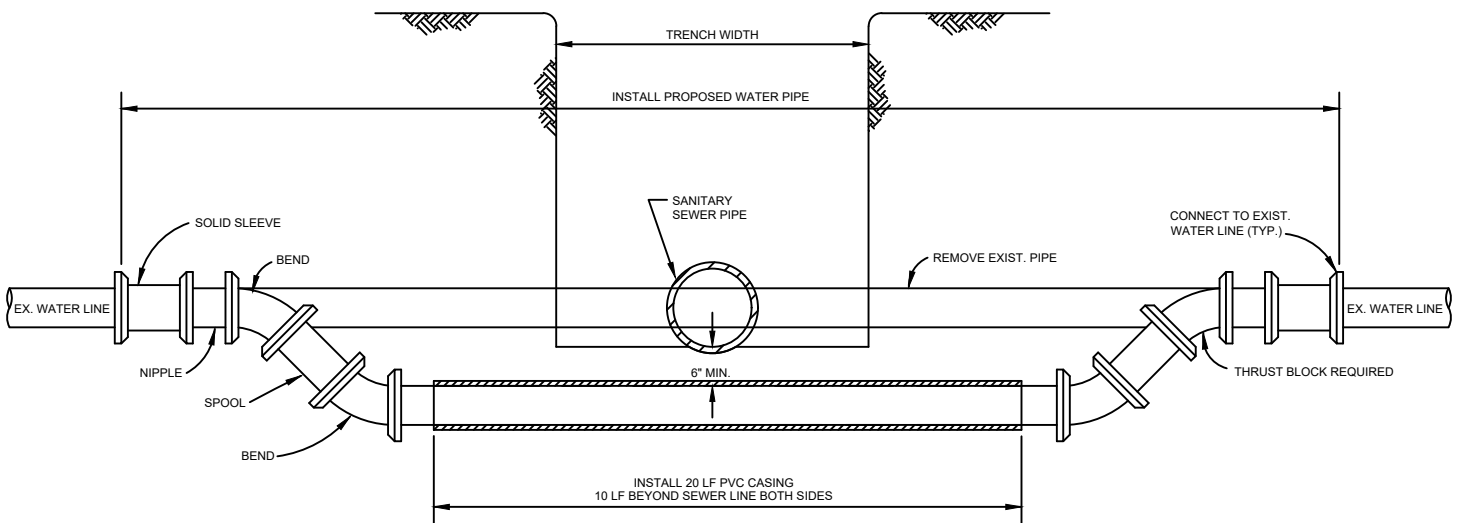
LOCATOR WIRE DIRECT BURY SPLICE DETAIL



TRACE WIRE TEST STATION DETAIL

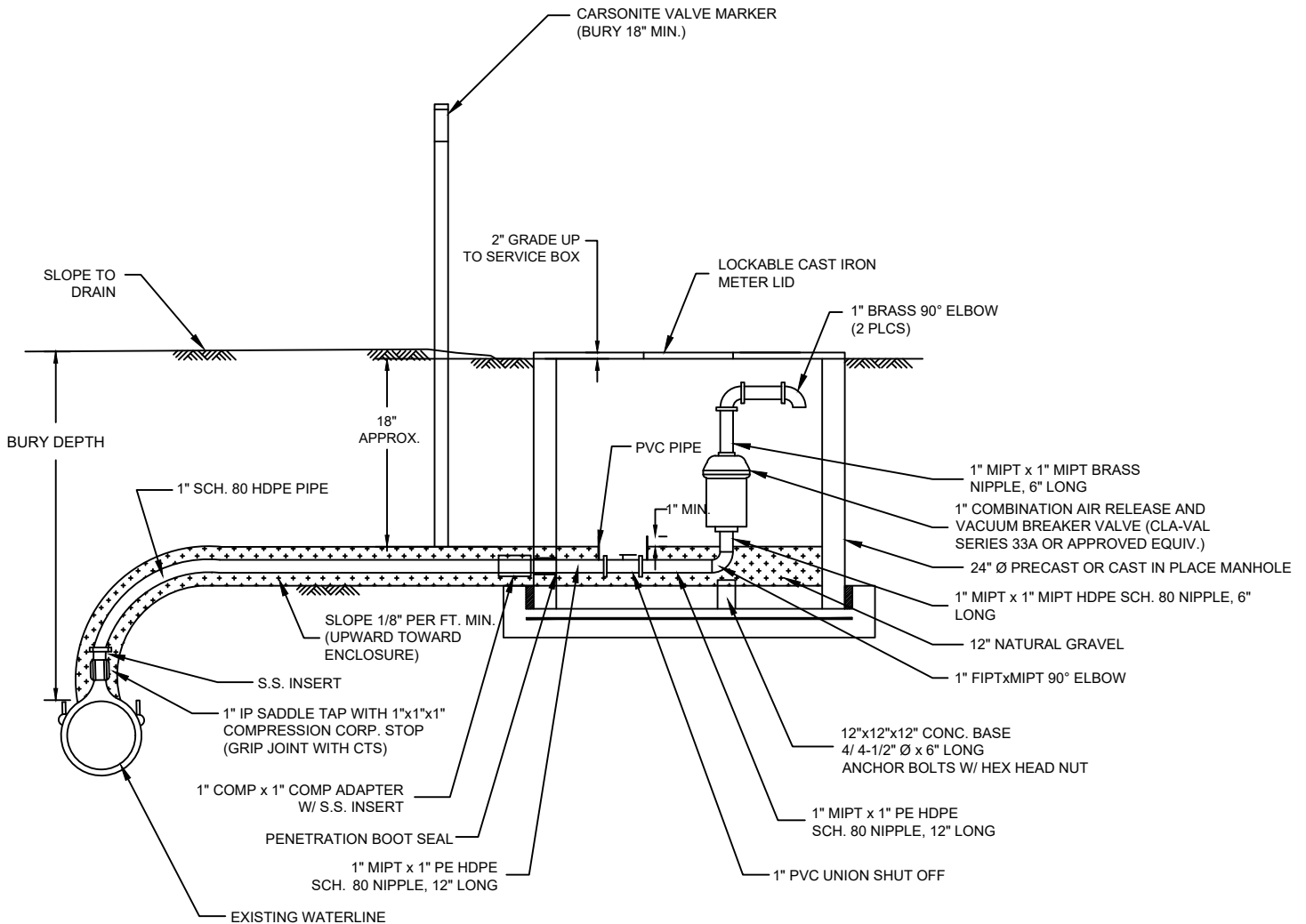
GENERAL NOTES:

1. INSTALL EVERY 1,000 FEET OR AS REQ'D. BY CITY OF JOSEPHINE.
2. LOCATE AT PROPERTY LINES & ADJACENT TO EXISTING FENCES, UTILITY POLES OR OTHER APPURTENANCES AS MAY BE PRACTICAL.
3. COLOR IS BLUE.
4. LITTLE FINK MODEL, AS MANUFACTURED BY COTT OR EQUIVALENT



WATER MAIN LOWERING

- NOTES:
1. PROPOSED WATER PIPE SHALL BE DUCTILE IRON UNLESS OTHERWISE SPECIFIED IN PLANS. ALL FITTINGS SHALL BE DUCTILE IRON (M.J.-P.E.) MEGALUG.
 2. PROPOSED PIPING & FITTINGS ARE SYMMETRIC ABOUT CENTER OF SANITARY SEWER AND SHALL RETAIN TEST PRESSURES.
 3. ALL THRUST BLOCKING SHALL BE SUBSIDIARY TO UNIT PRICE.
 4. CROSSING OF SANITARY SEWER SHALL BE IN ACCORDANCE WITH T.C.E.Q. REQUIREMENTS.



AIR AND VACUUM RELEASE VALVE ASSEMBLY

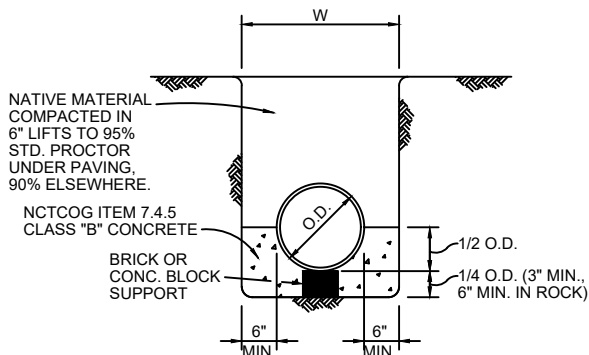
STANDARD DETAILS
FOR
CITY OF JOSEPHINE
COLLIN & HUNT COUNTIES, TEXAS



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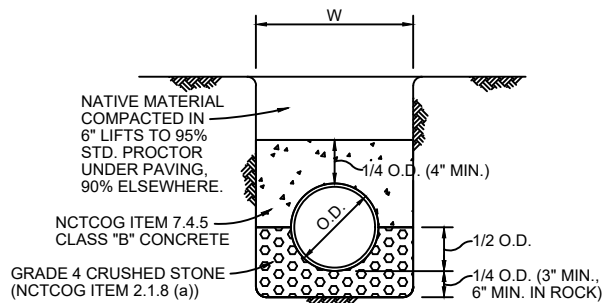
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AIR/VACUUM RELEASE DETAIL



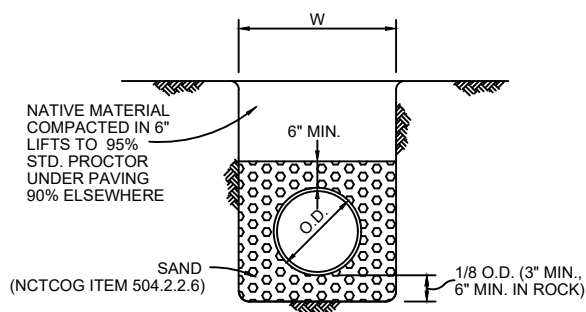
CLASS A EMBEDMENT

CONCRETE CRADLE



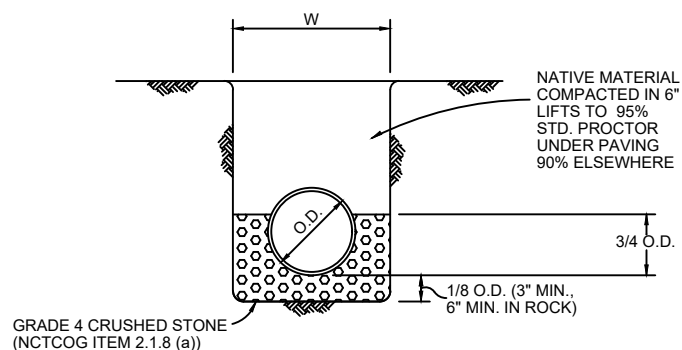
CLASS A-1 EMBEDMENT

CONCRETE CAP



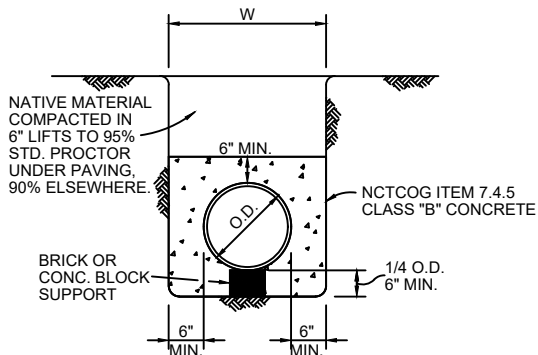
CLASS B+ EMBEDMENT

STD PVC WATER



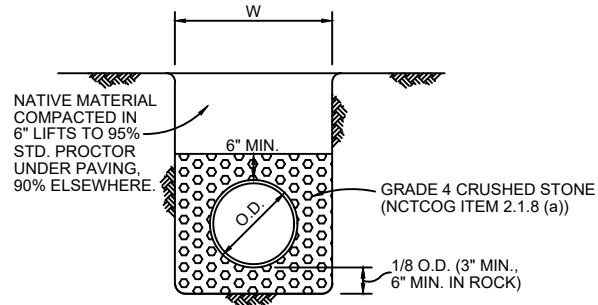
CLASS C EMBEDMENT

STD. DUCTILE IRON WATER OR SEWER
STD. R.C.C.P. WATER
STD. STORM SEWER



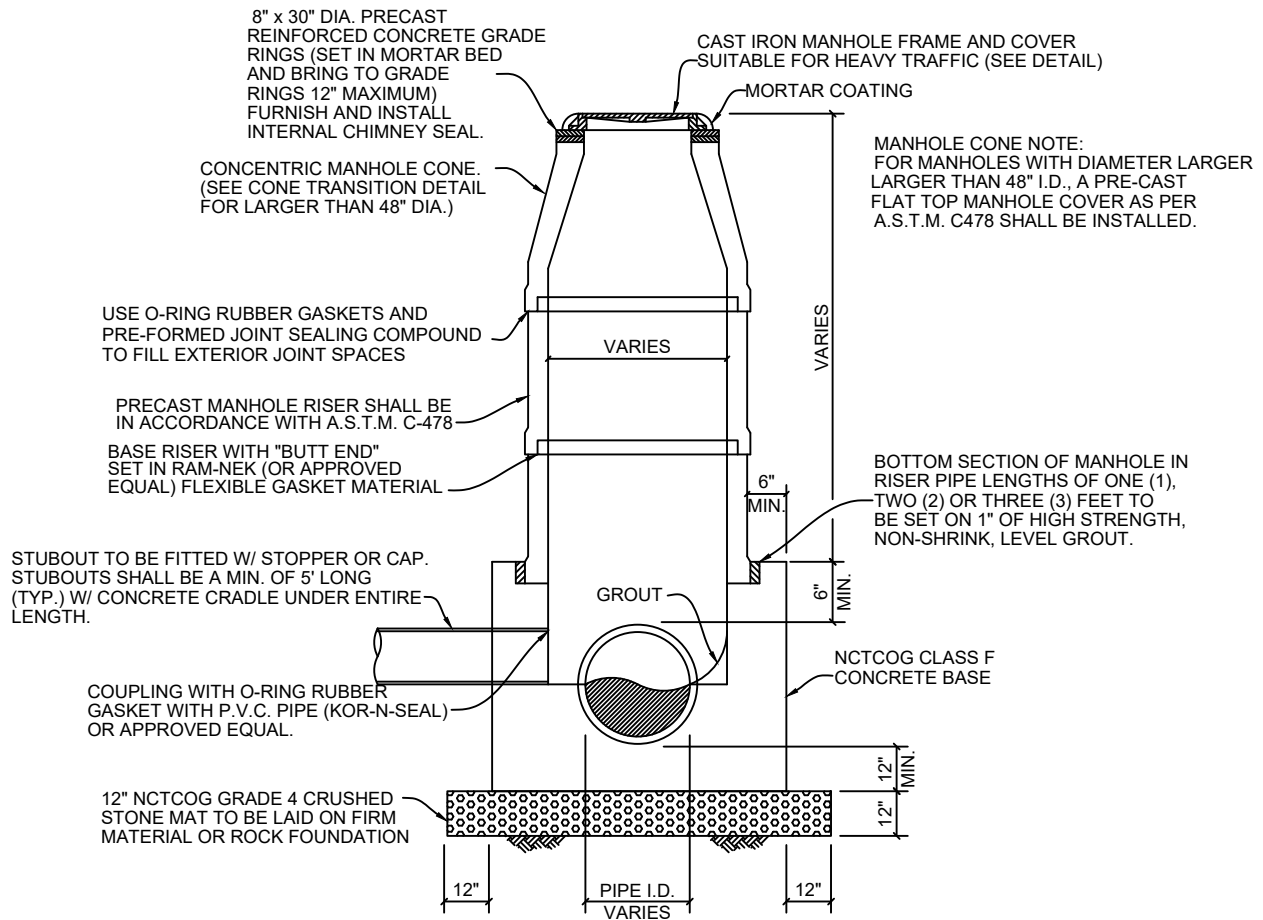
CLASS G EMBEDMENT

CONCRETE ENCASEMENT



CLASS H EMBEDMENT

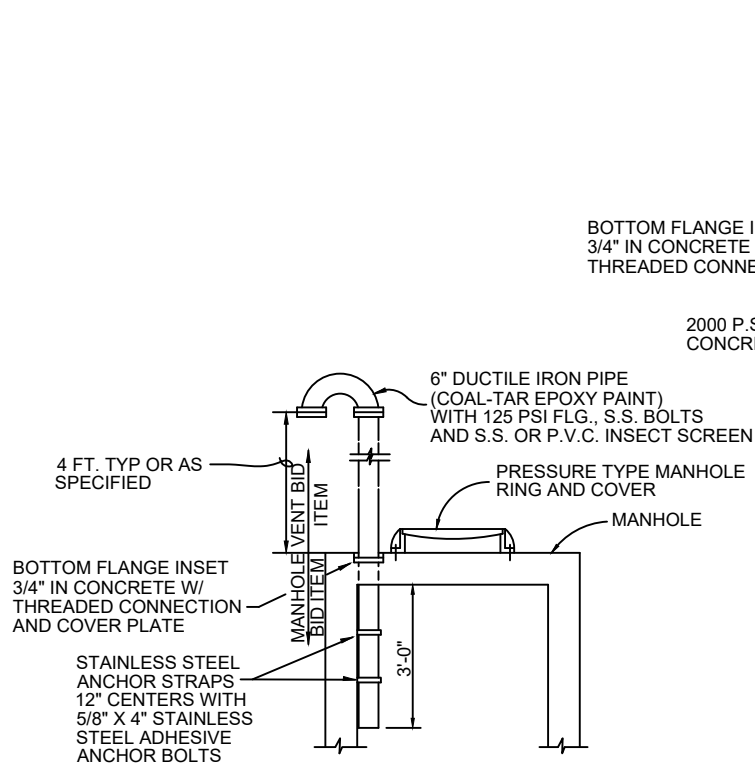
STD. P.V.C. SEWER



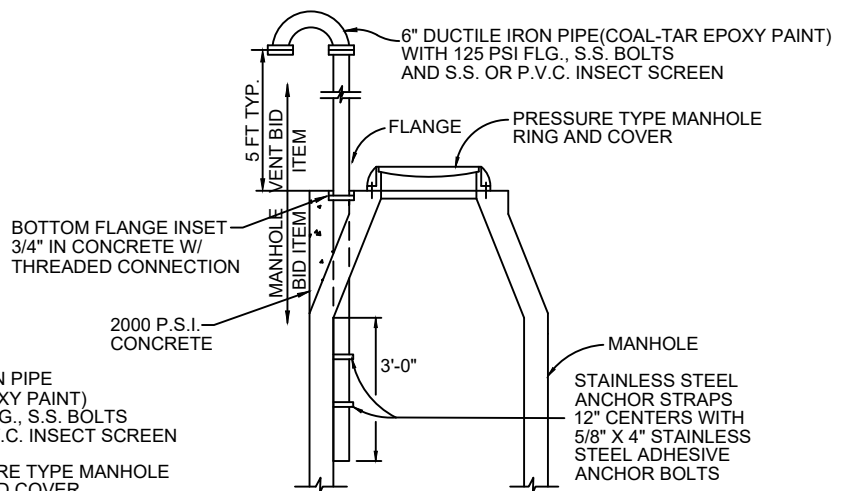
PRECAST CONCRETE MANHOLE

NOTE:

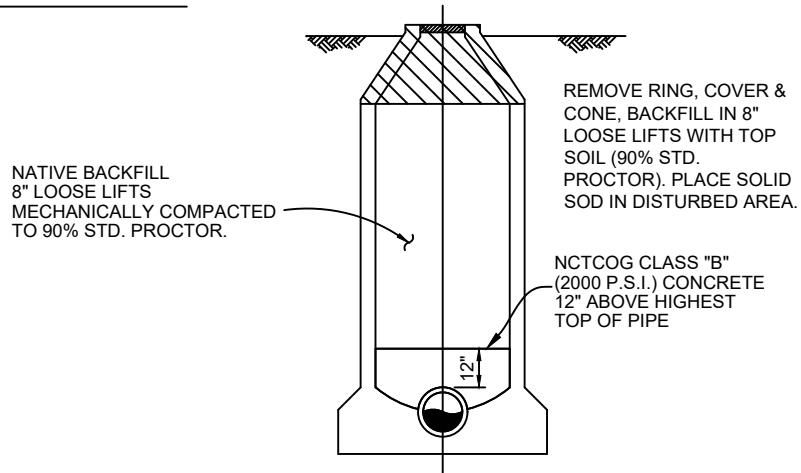
1. ALL JOINTS IN PRECAST MANHOLE SHALL BE SEALED ON OUTSIDE OF MANHOLE WITH AQUAGUARD SHRINK SEAL.
2. ALL BASES FOR PIPES OVER 24" DIA. SHALL BE CAST IN PLACE OR AS NECESSARY TO PROVIDE AT LEAST 18" WIDE SOLID WALL IN BETWEEN PENETRATIONS DUE TO DEFLECTION ANGLE.



FLAT TOP MANHOLE VENT
NO SCALE

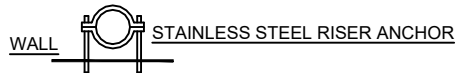


CONE TOP MANHOLE VENT
NO SCALE



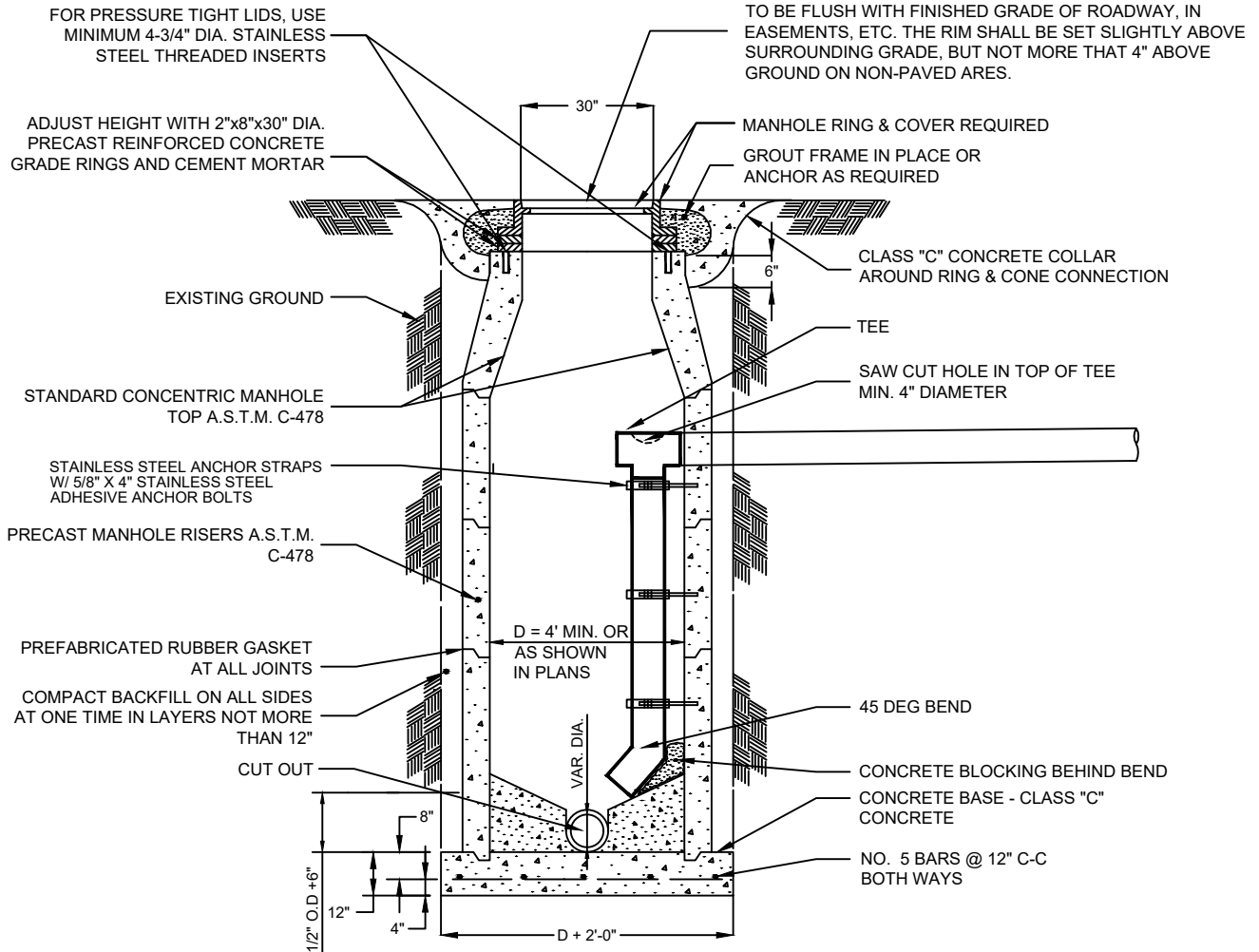
MANHOLE ABANDONMENT
OUTSIDE PAVEMENT AREA

MONOLITHIC CONCRETE PAVEMENT AROUND MANHOLE SAME THICKNESS AS STREET . BLOCKOUTS SHALL BE MINIMUM 12" THICK (SEE DETAIL THIS SHEET).



NOTES:

1. BOLT SIZE: 3/8" DIA. LENGTH: NOT TO EXCEED 1" PAST ANCHOR WHEN INSTALLED
2. TYPE: 304 OR 316 STAINLESS
3. BOLT ANCHOR DEPTH: 2" MIN., EPOXY SEALER NOT TO PROTRUDE THROUGH MANHOLE WALL.
4. ANCHOR SPACING: 4' MAX. (MIN. NUMBER OF ANCHORS - 2 PER DROP: 1 - 6" BELOW TEE, 1 - 6" ABOVE 45 DEG BEND AT TOP OF M.H.)
5. DROP PIPE TYPE: SDR-35 (BELL & SPIGOT)
6. BOTTOM BEND NOT TO BE GREATER THAN 45 DEG., BEND NOT TO BE MORE THAN 4" FROM BENCH OF MANHOLE



INTERNAL DROP WASTEWATER MANHOLE

MANHOLE NOTES:

1. PIPE DIAMETER TO BE THE SAME AS LINE CONSTRUCTION.
2. APPROVED PREFABRICATED RUNNER GASKET OR O-RING SHALL BE USED AT ALL JOINTS
3. FOR MANHOLES IN PAVEMENT, A 6"x6" MIN. SIZE BLOCKOUT IS REQUIRED.
4. PIPE TO MANHOLE CONNECTORS SHALL BE KOR-N-SEAL OR APPROVED EQUAL.

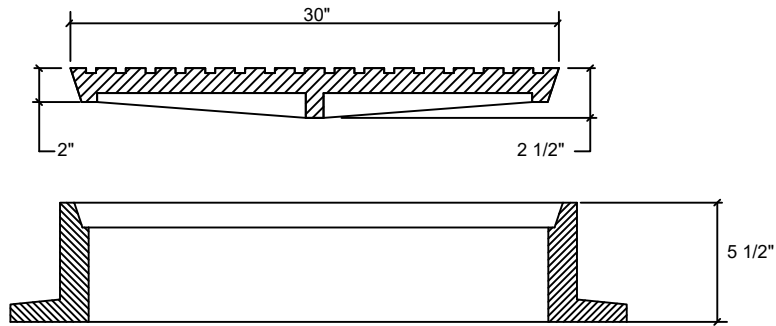
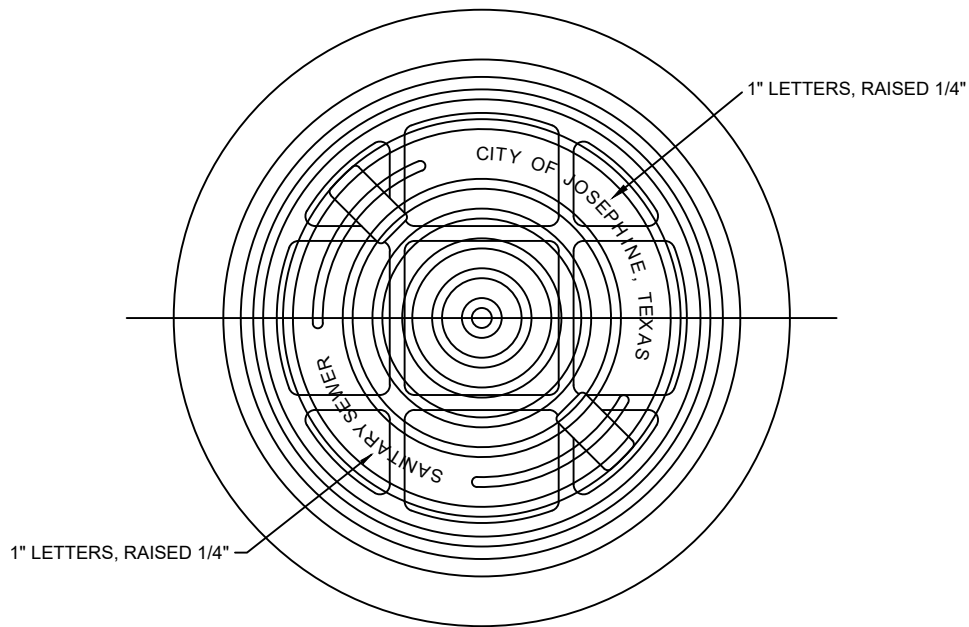
STANDARD DETAILS
FOR
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MANHOLE DETAIL (3)



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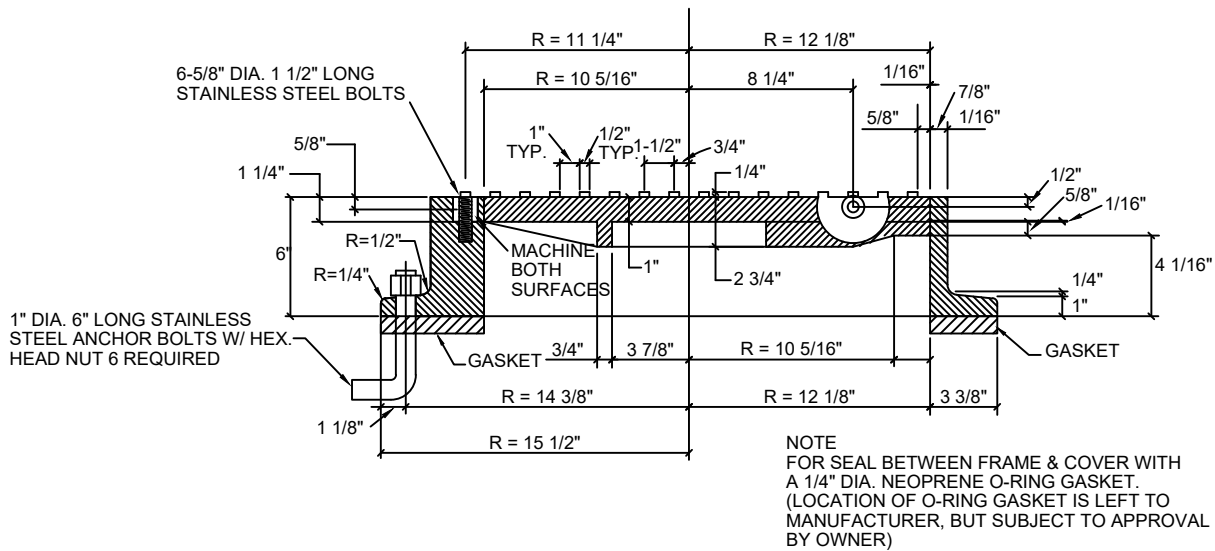
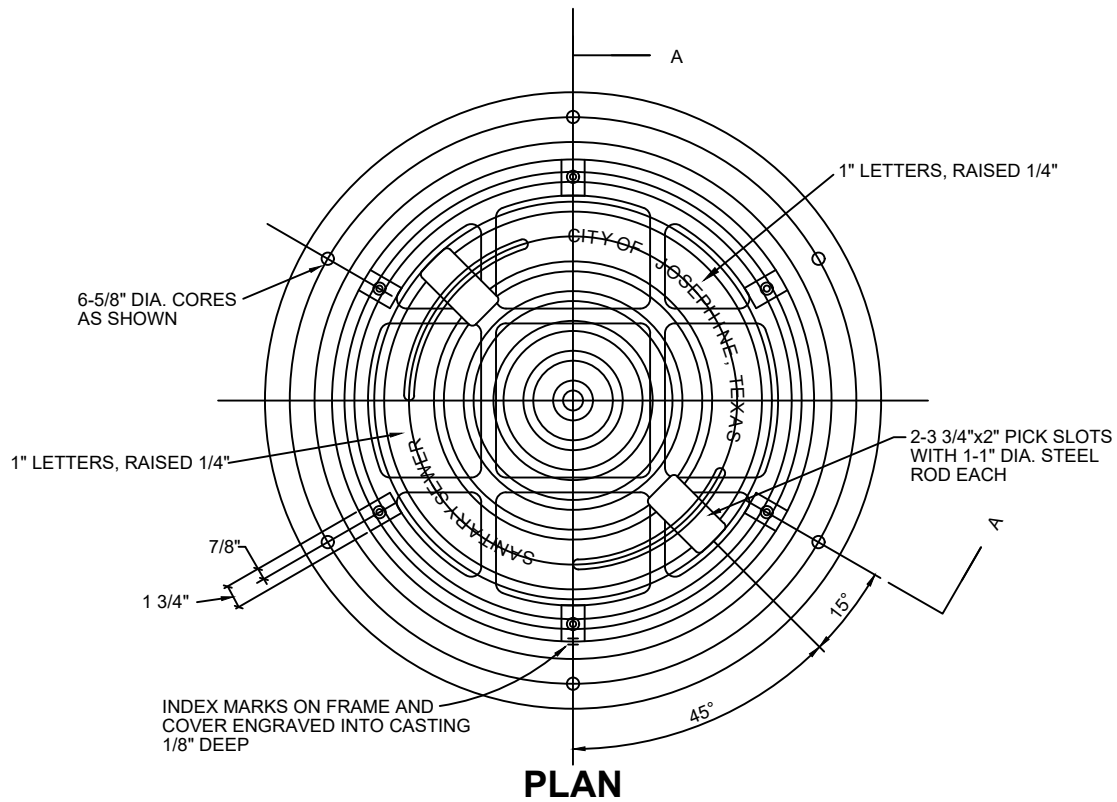
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MANHOLE RING AND COVER

WITH LOCKING DEVICE & PICK SLOTS

BASS AND HAYES FOUNDRY, INC.
 TRAFFIC BEARING MANHOLE: 400-24
 NON TRAFFIC BEARING MANHOLES: 300-24



SECTION A-A

PRESSURE TYPE MANHOLE FRAME AND COVER

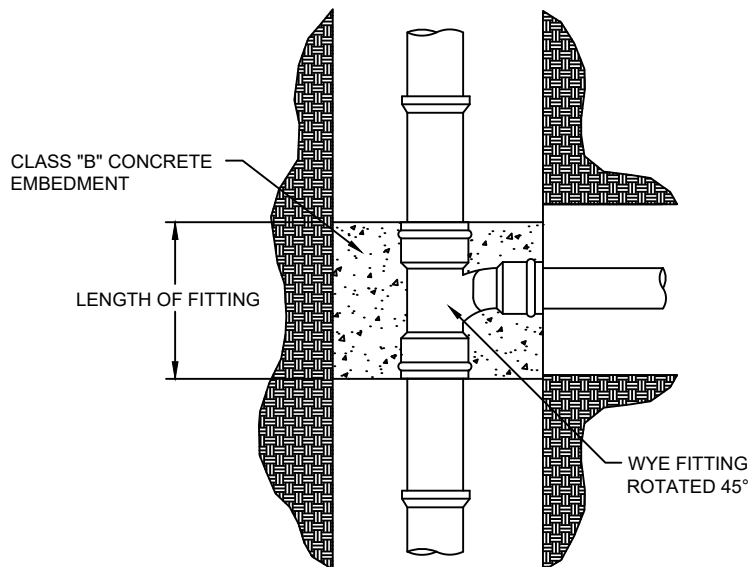
STANDARD DETAILS
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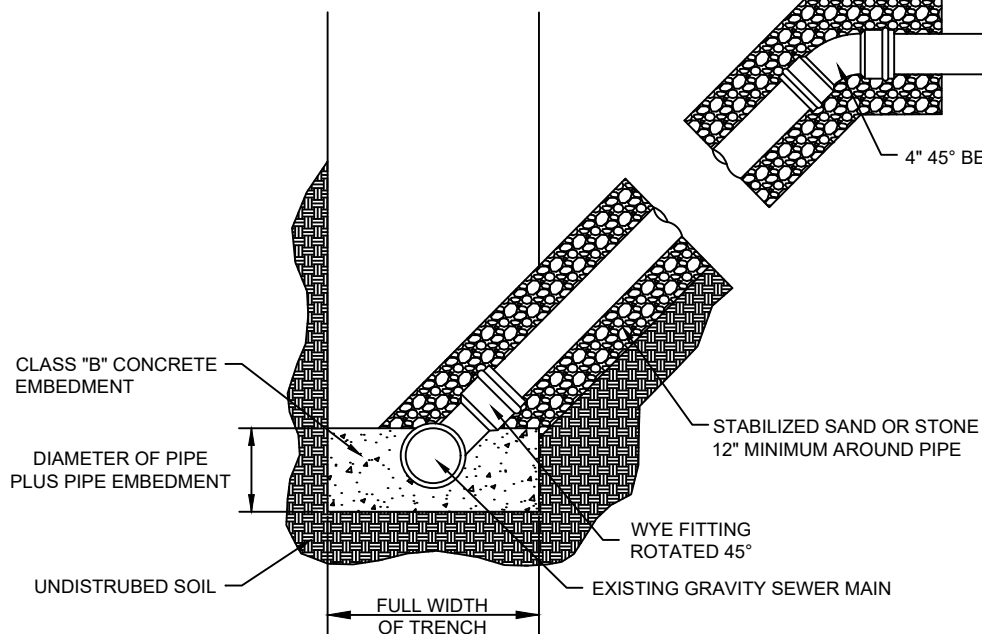
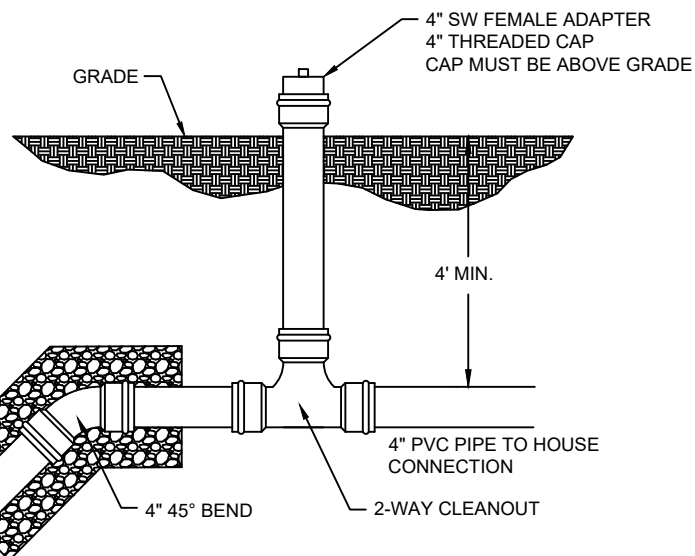
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MANHOLE DETAILS (5)

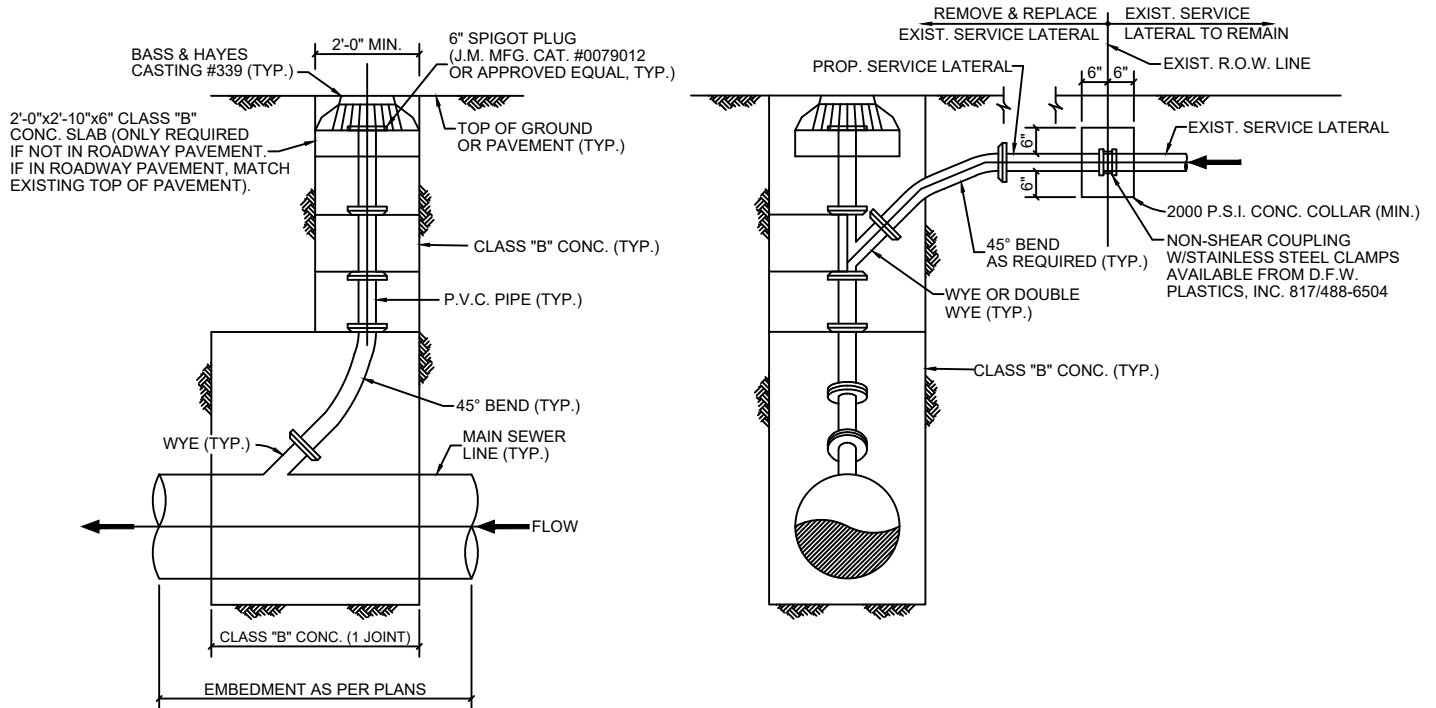


NOTES:

1. A RESIDENTIAL 2-WAY CLEANOUT IS REQUIRED AT THE PROPERTY LINE.
2. SEWER SERVICE LATERAL IS TO BE SCHEDULE 40 PVC, MINIMUM 4" IN DIAMETER.



SEWER SERVICE CONNECTION

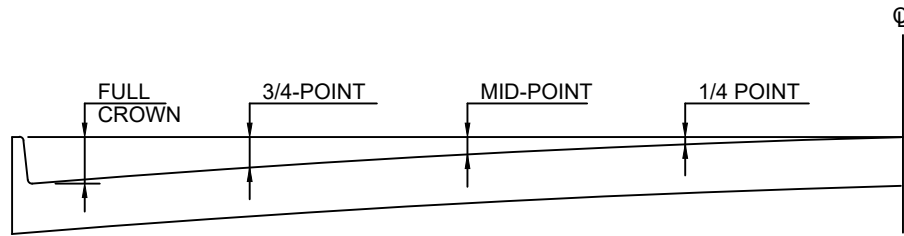


VERTICAL CLEANOUT CONNECTION

(CONNECTION, WYE, CONCRETE, BENDS, CASTING, ETC. ALL SUBSIDIARY TO CLEANOUT)

VERTICAL CLEANOUT NOTES:

1. CLASS "B" CONCRETE (NCTCOG ITEM 7.4.5)
2000 P.S.I. COMP. STRENGTH AT 28 DAYS
MIN. 4 SACK OF CEMENT PER C.Y.
MAX. W/C = 6.0
COARSE AGG. 1-2-3
2. ALL WYES, STACKS AND PIPE SERVICE CONNECTIONS SHALL BE P.V.C. SDR-35.



ROADWAY WIDTH (W)	TOTAL CROWN HEIGHT	3/4 POINT	MID-POINT	1/4 POINT
31, 32	4"	2-1/4"	1"	1/4"
38	6"	3-3/8"	1-1/2"	3/8"
48	6"	3-3/8"	1-1/2"	3/8"
72	8"	4-1/2"	2"	1/2"

CROWN HEIGHTS AND ORDINATES

NOTE: SLIP-FORM PAVEMENT MUST MEET CROWN GRADES AT GUTTERS, AT MID-POINTS & CL
 PARABOLIC ROADS ONLY TO BE CONSTRUCTED WITH SLIP FORM PAVERS
 APPROVED ROADWAY WIDTHS: 31, 32, 38, 48, 72

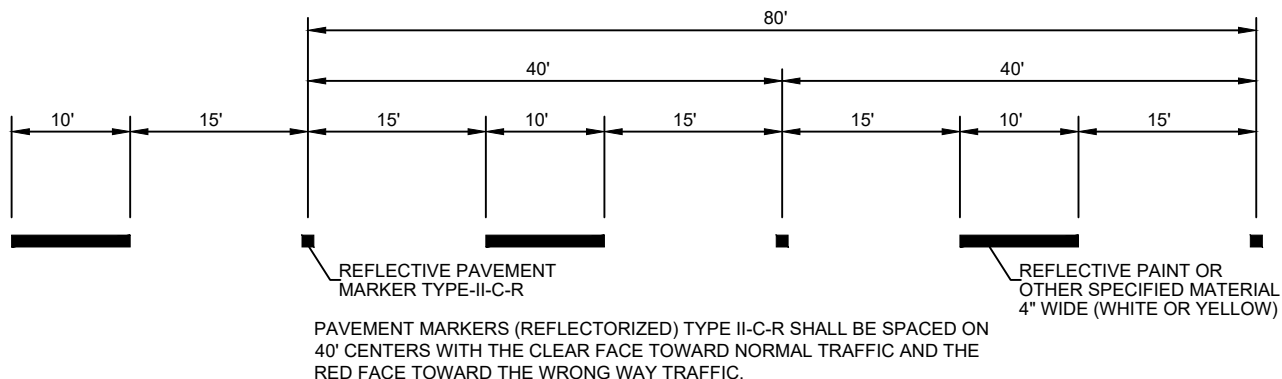
STREET DESIGN STANDARDS

TYPE	# of Lanes	R.O.W.	PAVEMENT (Face to Face)	MEDIAN (Face to Face)	PARKWAY WIDTH
Regional Arterial	4 Divided	110'	See Collin Co.	See Collin Co.	See Collin Co.
Major Thoroughfare	6 Divided	120'	6/12' (72')	22'	13'
Major Thoroughfare	4 Divided	100'	4/12' (48')	24'	14'
Local Collector	2	65'	38'	NONE	13.5'
Residential Street	2	50'	31'	NONE	9.5'
Estate Residential	2	60'	32' *	NONE	14'

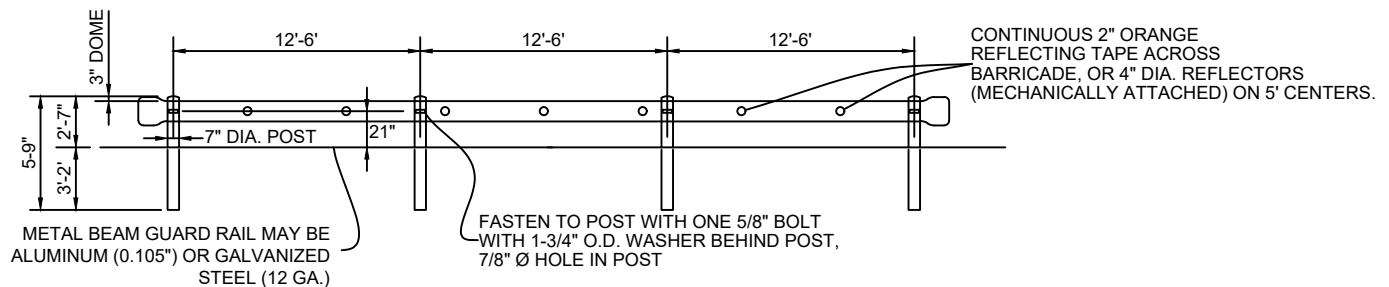
* - Pavement dimension for Estate Residential is Edge to Edge of Shoulder.

NOTES:

1. PAVEMENT REINFORCING BARS SHALL BE NO 3 BARS ON 18" CENTERS OR NO 4 BARS ON 24" CENTERS BOTH WAYS UNLESS OTHERWISE APPROVED.
2. 7" LIME STABILIZED SUBGRADE REQUIRED.
3. NCTCOG STANDARD DIMENSIONS SHALL BE MODIFIED TO REFLECT DIMENSIONS NOTED ABOVE.

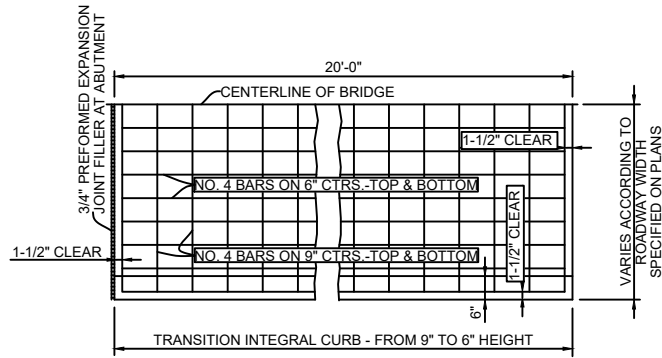


LANE LINE PAVEMENT MARKING

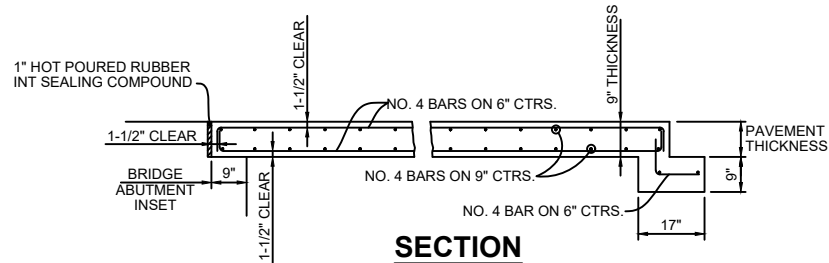


NON CONSTRUCTION BARRICADES (PERMANENT BARRICADES) SHALL CONSIST OF TxDOT GF(TD)-87 METAL BEAM GUARD FENCE WITH TERMINAL CONNECTOR SECTIONS AT EACH END. PERMANENT BARRICADES SHALL BE MANUFACTURED AND CONSTRUCTED IN ACCORDANCE WITH TxDOT DETAILS. BARRICADE SHALL EXTEND FROM OUTSIDE CURB TO OUTSIDE CURB.

PERMANENT BARRICADE DETAIL

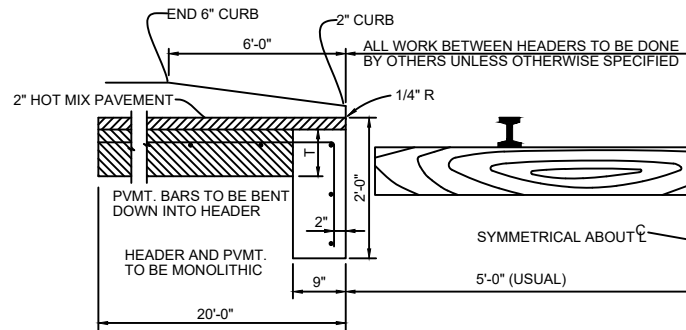


PLAN

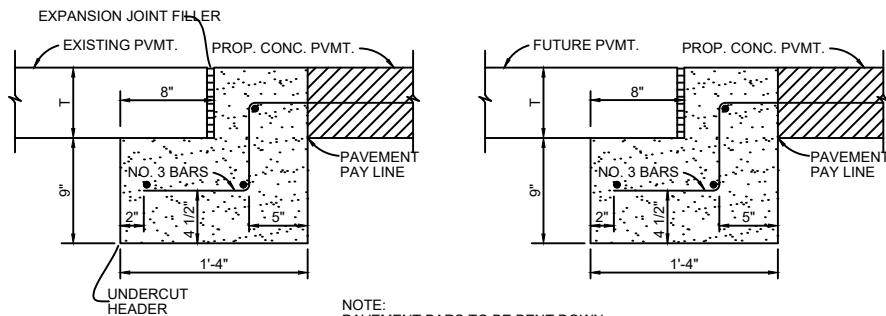


SECTION

BRIDGE APPROACH SLAB



RAIL HEADER



STREET HEADER

STANDARD DETAILS
FOR
CITY OF JOSEPHINE
COLLIN & HUNT COUNTIES, TEXAS

DUNAWAY IDBI

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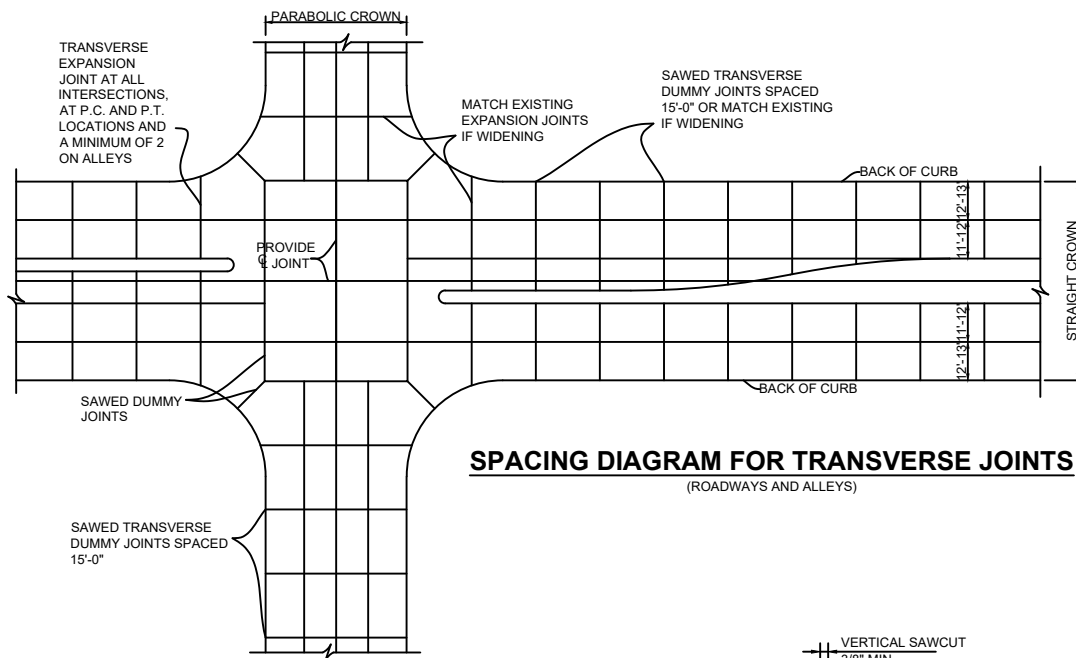
DATE: 6-12-15

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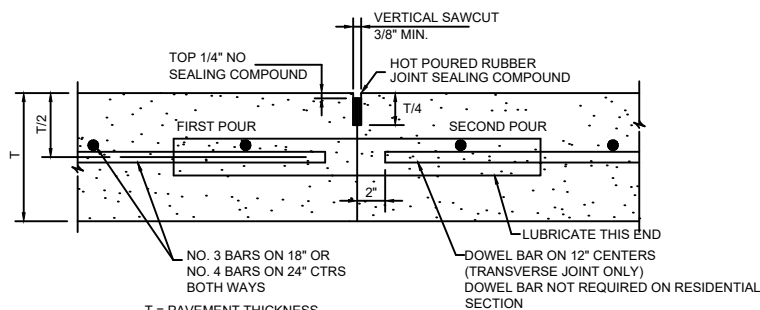
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STREET HEADER & BRIDGE APPROACH DETAILS



SPACING DIAGRAM FOR TRANSVERSE JOINTS

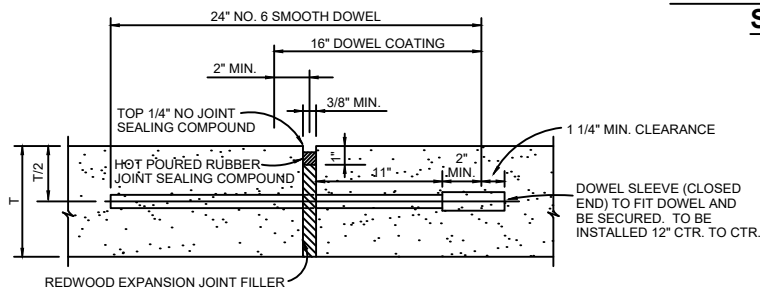
(ROADWAYS AND ALLEYS)



NOTE:

1. DOWELS AND REINFORCING BARS SHALL BE SUPPORTED BY AN APPROVED DEVICE.

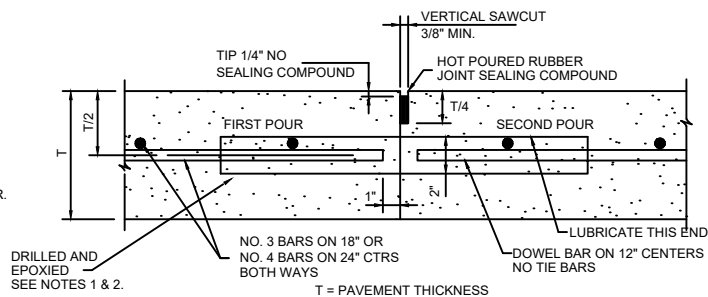
TRANSVERSE AND LONGITUDINAL SAWED DUMMY JOINT



TRANSVERSE EXPANSION JOINT NOTES:

1. DOWELS AND REINFORCING BARS SHALL BE SUPPORTED BY AN APPROVED DEVICE.
2. TRANSVERSE EXPANSION JOINTS SHALL BE LOCATED AT ALL INTERSECTIONS.

TRANSVERSE EXPANSION JOINT



DRILLED AND EPOXIED
SEE NOTES 1 & 2.

NOTE:

1. T-8" AND GREATER NO. 6 BAR, T-6" AND LESS NO. 5 BAR
2. DOWEL BARS SHALL BE DRILLED INTO PAVEMENT HORIZONTALLY BY USE OF A MECHANICAL RIG. HAND DRILLING NOT ACCEPTABLE AND PUSHING DOWEL BAR INTO GREEN CONCRETE IS NOT ACCEPTABLE. DAMAGE TO EXISTING PAVEMENT SHALL BE REMOVED BY CONTRACTOR AND JOINT CONSTRUCTED AT CONTRACTORS EXPENSE.
3. DOWELS AND REINFORCING BARS SHALL BE SUPPORTED BY AN APPROVED DEVICE.

TRANSVERSE AND LONGITUDINAL CONSTRUCTION JOINT

STANDARD DETAILS
FOR
CITY OF JOSEPHINE
COLLIN & HUNT COUNTIES, TEXAS

STREET JOINT DETAILS

DUNAWAY IDBI

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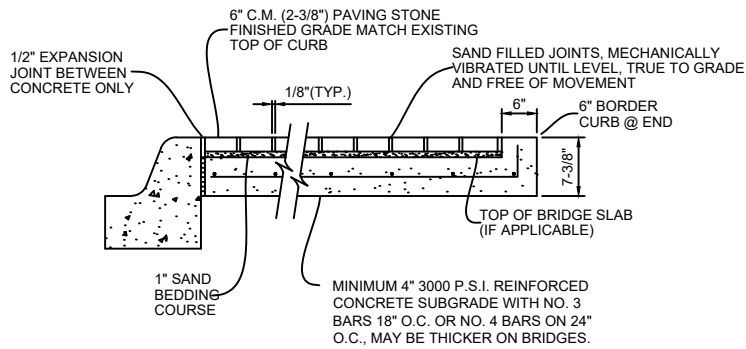
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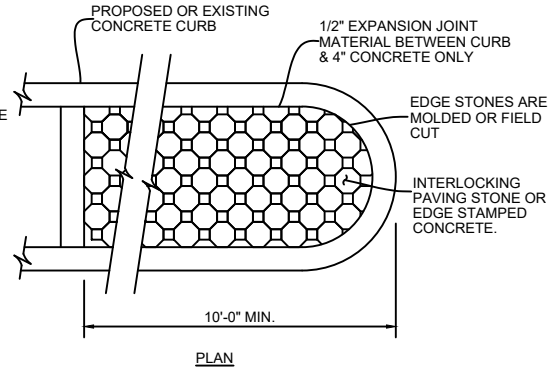
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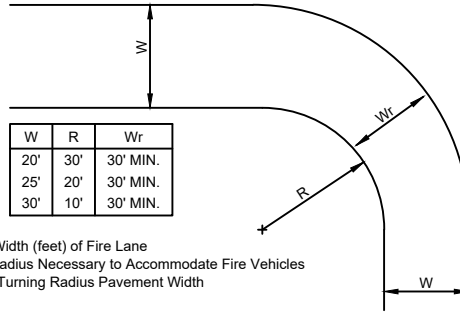
TYPICAL CROSS SECTION



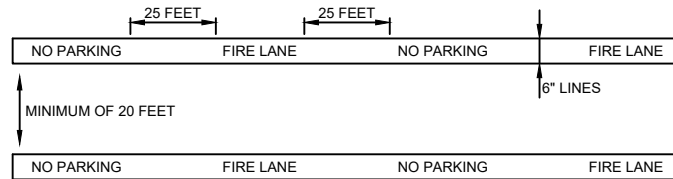
MEDIAN PAVING SHALL EXTEND TO A POINT WHERE MEDIAN IS 6' WIDE. IF MEDIAN IS 6' WIDE, SHALL EXTEND 15' FROM NOSE. FOR MEDIANS WIDER THAN 6', PAVING SHALL EXTEND 10' FROM NOSE. ALL DISTANCES ARE MINIMUM.

STAMPED CONCRETE OR INTERLOCKING PAVING STONE

COLOR AND STYLE TO BE SELECTED BY CITY



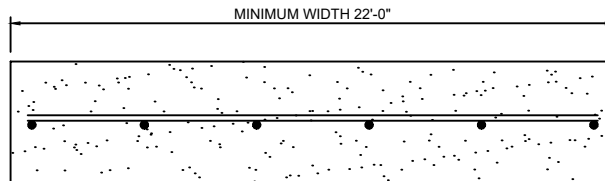
FIRE LANE DESIGN



NOTE:

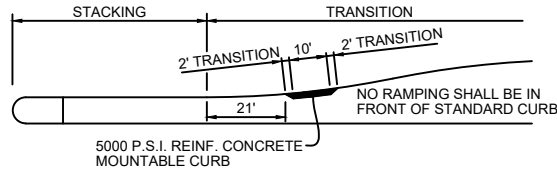
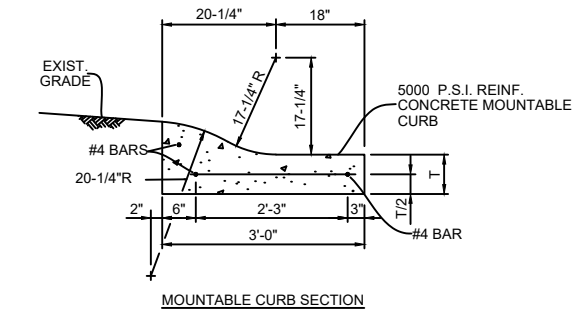
1. THE FIRE CHIEF IS AUTHORIZED TO DESIGNATE FIRE LANES.
2. FIRE LANES SHALL BE MARKED BY SIX INCH (6") WIDE LINES USING RED TRAFFIC PAINT, WITH THE WORDING "NO PARKING" AND "FIRE LANE" PAINTED ON THE LINES AT INTERVALS OF TWENTY-FIVE (25'). THE LETTERING WILL BE FOUR INCHES (4") HIGH WITH A ONE INCH (1") WIDE STROKE PAINTED WITH WHITE TRAFFIC PAINT.
3. FIRE LANES SHALL BE A MINIMUM OF TWENTY-FEET (20') IN WIDTH.
4. ANY DEAD-END FIRE LANE MORE THAN ONE HUNDRED FIFTY-FEET (150') LONG SHALL PROVIDE A TURN AROUND OF ONE HUNDRED FEET (100') IN DIAMETER AT THE CLOSED END.

FIRE LANE MARKING

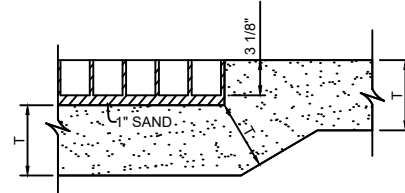
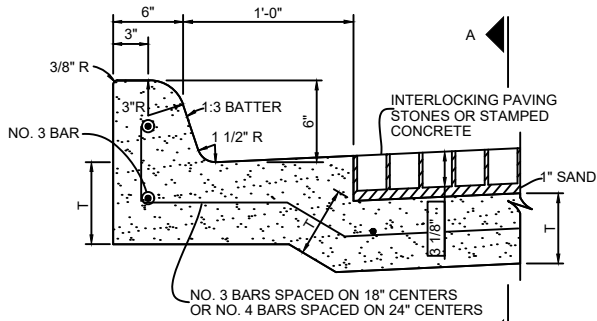


1. ALL FIRE LANES SHALL BE PAVED WITH A MINIMUM OF 8 INCHES OF 3000 P.S.I. CONCRETE REINFORCED WITH #3 REBAR PLACED ON 18 INCH CENTERS EACH WAY ON A 6 INCH LIME STABILIZED SUBGRADE. THE SUBGRADE SHALL BE STABILIZED WITH HYDRATED LIME IN SUFFICIENT AMOUNT TO REDUCE THE PLASTICITY INDEX BELOW FIFTEEN (15). IF NO LABORATORY CONTROL IS USED, THE AMOUNT OF LIME SHALL BE EQUAL TO SEVEN AND ONE HALF (7-1/2) PERCENT BY UNIT DRY WEIGHT OF SOIL ESTIMATED AT 75 POUNDS PER CUBIC FEET OF 32 POUNDS OF LIME PER SQUARE YARD OF SURFACE AREA TREATED TO A 6 INCH THICKNESS.
2. ALL FIRE LANES MAY BE PAVED WITH 6 INCHES OF 3000 P.S.I. CONCRETE (28 DAYS COMPRESSIVE STRENGTH) REINFORCED WITH #3 REBAR PLACED ON 18 INCH CENTERS EACH WAY ON A SUBGRADE SCARIFIED AND COMPACTED TO AT LEAST 95% STANDARD PROCTOR DENSITY. CONTRACTION JOINTS SHALL BE SPACED AT A MAXIMUM OF 15.5 FEET ON CENTERS EACH WAY. CONTRACTION JOINTS MAY BE DUMMY OR SAWED JOINTS TO A DEPTH OF AT LEAST ONE (1) INCH DEEP. TO INSURE PROPER RUNOFF IN ORDER TO PREVENT PONDING, THE PAVEMENT SURFACE SHOULD HAVE A MINIMUM SLOPE OF 1%(12" PER 100 FEET.).
3. ALTERNATE PAVING DESIGN:
IN LIEU OF ITEMS LISTED ABOVE, THE DEVELOPER MAY SUBMIT AN ENGINEERED DESIGN THAT WILL BE EQUIVALENT IN PERFORMANCE OF THE SPECIFICATIONS ABOVE. THE EQUIVALENT DESIGN MUST TAKE INTO ACCOUNT THE SOIL CONDITIONS OF THE SITE TO BE DEVELOPED. SUCH DESIGN SHALL REQUIRE APPROVAL BY PUBLIC WORKS DIRECTOR.

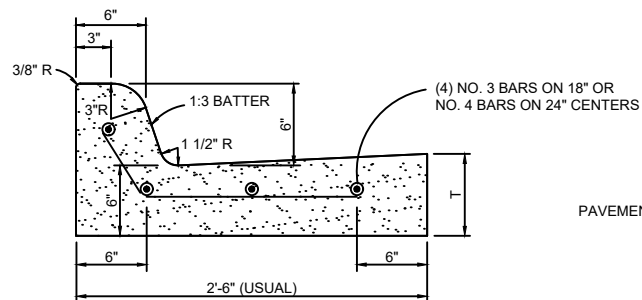
FIRE LANE PAVING & JOINT DETAIL



MOUNTABLE CURB DETAIL-PLAN VIEW LANDSCAPE MAINTENANCE RAMP

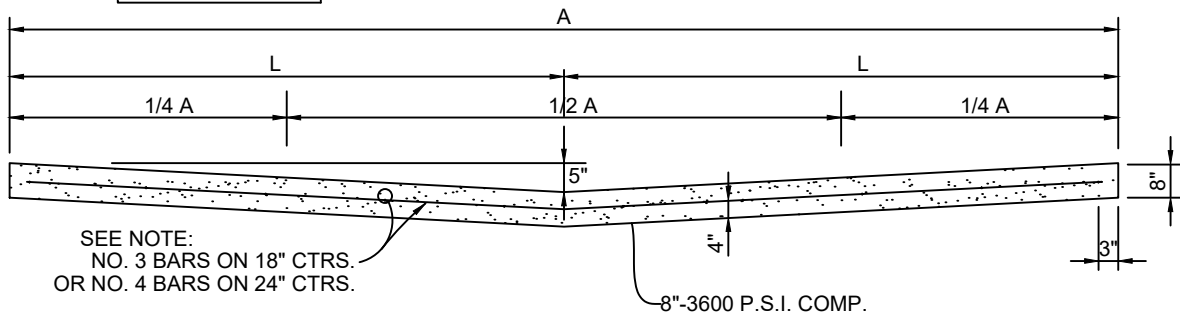


PAVING STONES SHALL BE PER NCTCOG
ITEMS 2.3.7 AND 5.8 OF SPECIAL PROVISIONS

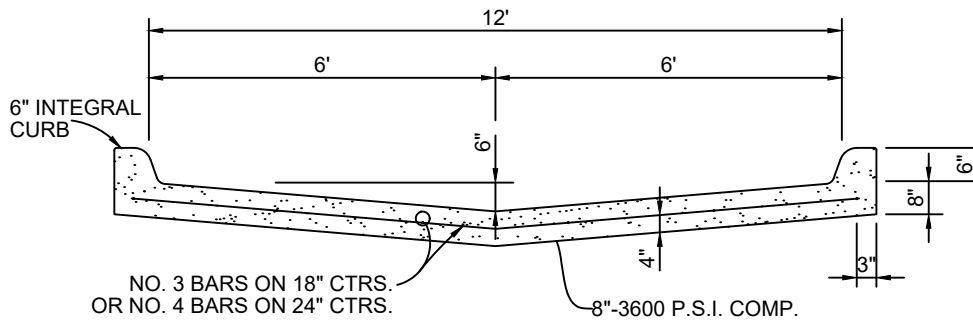


PAVEMENT: T= THICKNESS

ALLEY WIDTH (A)	HALF WIDTH (L)
12'	6'
16'	8'
20'	10'



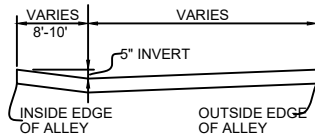
STANDARD 12, 16' & 20' ALLEY SECTION



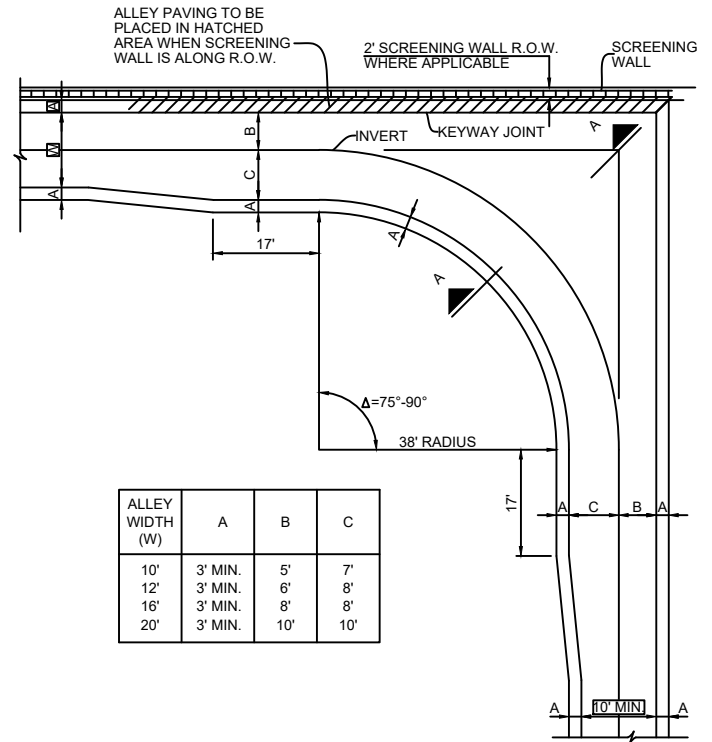
STANDARD ALLEY SECTION WITH CURBS

NOTE:

1. CONTRACTOR SHALL PROVIDE No. 3 BARS ON 12" CTRS OR No. 4 BARS ON 18' CENTERS FOR OUTSIDE 1/4 ALLEY WIDTH AND PROVIDE No. 3 BARS ON 18" CTRS OR No. 4 BARS ON 24" CENTERS FOR MIDDLE 1/2 ALLEY WIDTH.
2. CONTRACTOR MAY AT HIS OPTION USE No. 3 BARS ON 12" CTRS OR No. 4 BARS ON 18" CTRS FOR ENTIRE ALLEY WIDTH AT NO ADDITIONAL COST TO THE CITY.

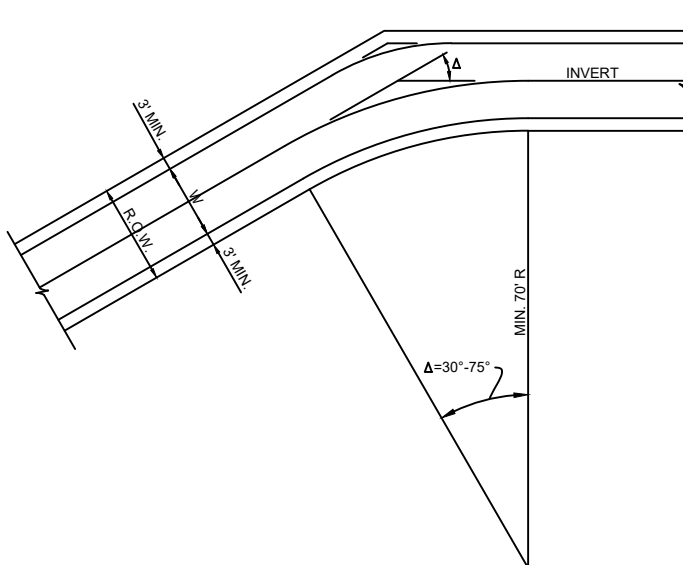


SECTION A-A

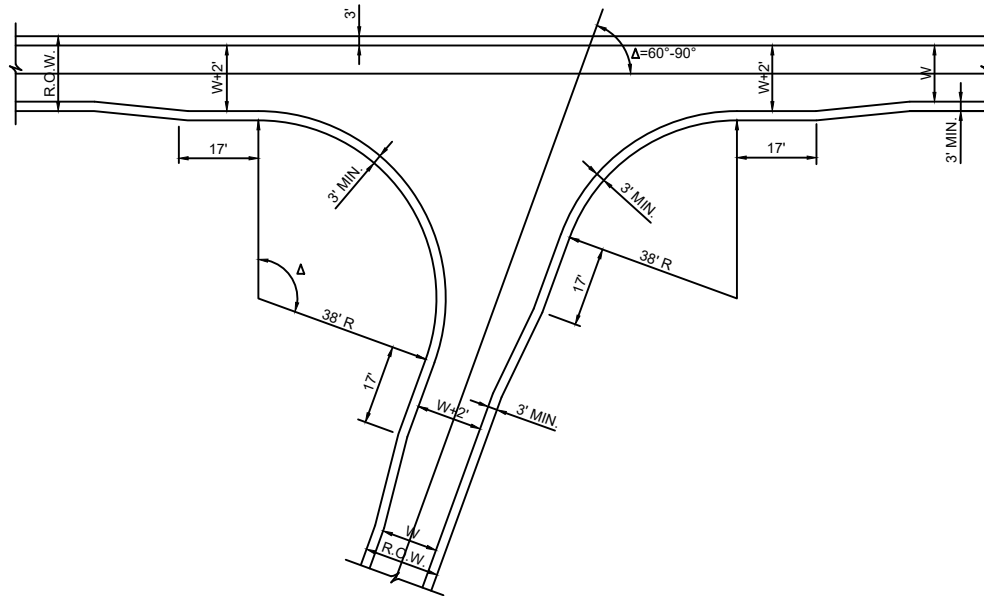


ALLEY WIDTH (W)	A	B	C
10'	3' MIN.	5'	7'
12'	3' MIN.	6'	8'
16'	3' MIN.	8'	8'
20'	3' MIN.	10'	10'

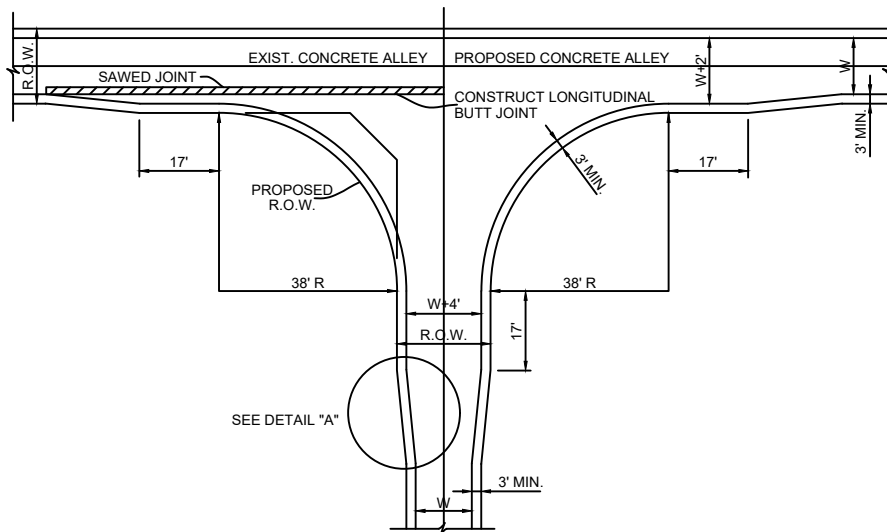
ALLEY TURN FOR $\Delta = 75^\circ - 90^\circ$



ALLEY TURN FOR $\Delta = 30^\circ - 75^\circ$



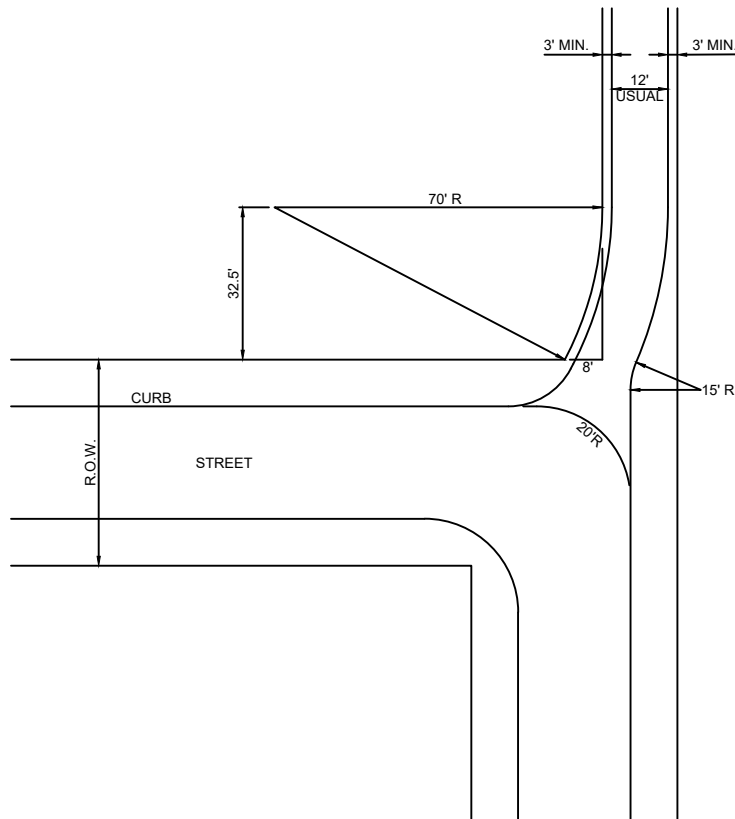
ALLEY TURN FOR $\Delta > 90^\circ$



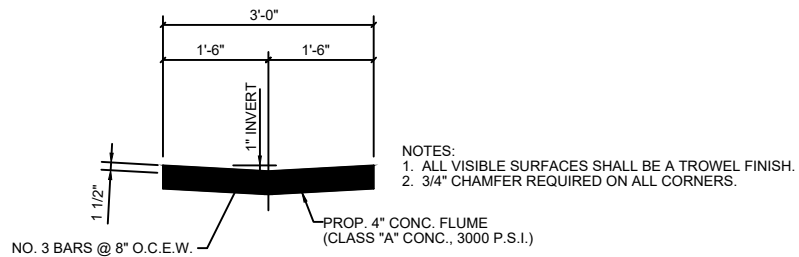
ALLEY INTERSECTING ALLEY



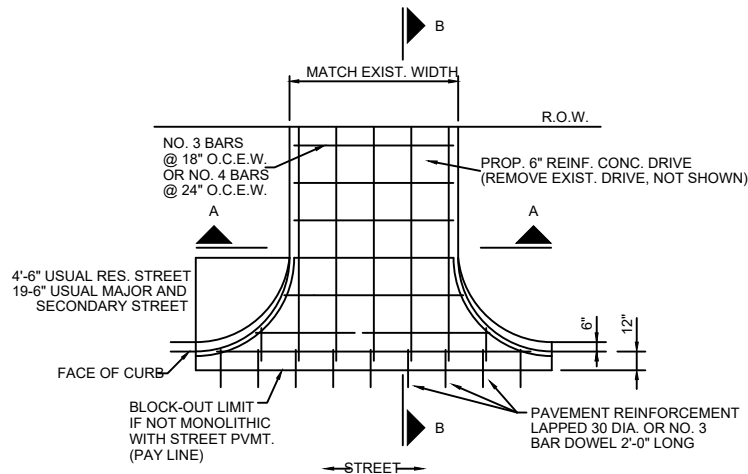
DETAIL "A"



ALLEY / STREET INTERSECTION



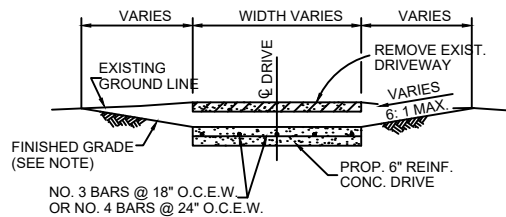
REINFORCED CONCRETE FLUME WITHOUT CURBS



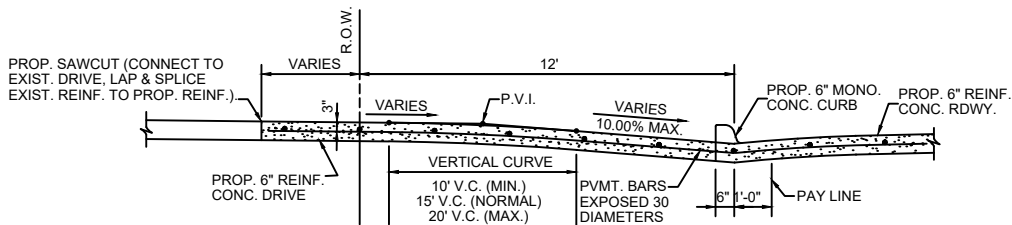
DRIVEWAY RETURN TO STREET

NOTES:

FINISHED GRADING WITHIN THE R.O.W. SHALL BE BROADCAST SEEDDED. WHERE PROPOSED DRIVEWAY CONSTRUCTION GOES BEYOND THE R.O.W. AND INTO PRIVATE PROPERTY, THE FINISHED GRADING SHALL BE BLOCK SODDED TO RESTORE THE LANDSCAPING TO ITS PRE-CONSTRUCTION APPEARANCE.



SECTION A-A



SECTION B-B

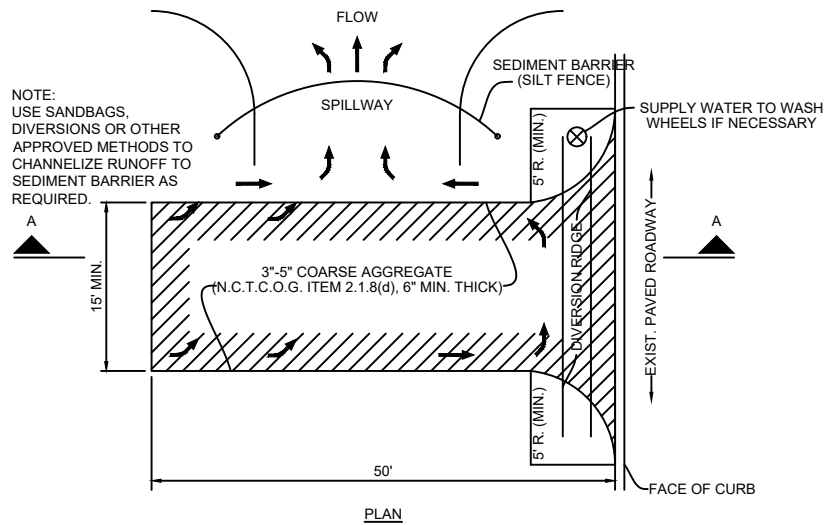
DRIVEWAY RETURN SECTIONS

NOTE:

1. CONTRACTOR SHALL PROVIDE NO. 3 BARS ON 12" CTRS OR NO. 4 BARS ON 18" CTRS FOR OUTSIDE 1/4 ALLEY WIDTH AND PROVIDE NO. 3 BARS ON 18" CTRS OR NO. 4 BARS ON 24" CTRS FOR MIDDLE 1/2 ALLEY WIDTH.
2. CONTRACTOR MAY AT HIS OPTION USE NO. 3 BARS ON 12" CTRS OR NO. 4 BARS ON 18" CTRS FOR ENTIRE ALLEY WIDTH AT NO ADDITIONAL COST TO THE CITY.



SECTION A-A



CONSTRUCTION ENTRANCE ROAD

FOR EROSION CONTROL

SHEET 39

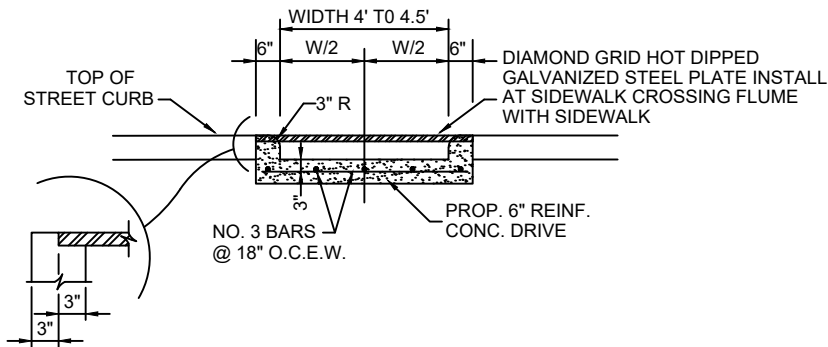
STANDARD DETAILS
FOR
CITY OF JOSEPHINE
COLLIN & HUNT COUNTIES, TEXAS

EROSION CONTROL DETAILS

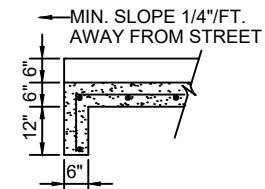
DUNAWAY IDBI

118 McKinney St. • P.O. Box 606 • Farmersville, Texas 75442
Tel: 972.784.7777
(TXENG FIRM F-1114)

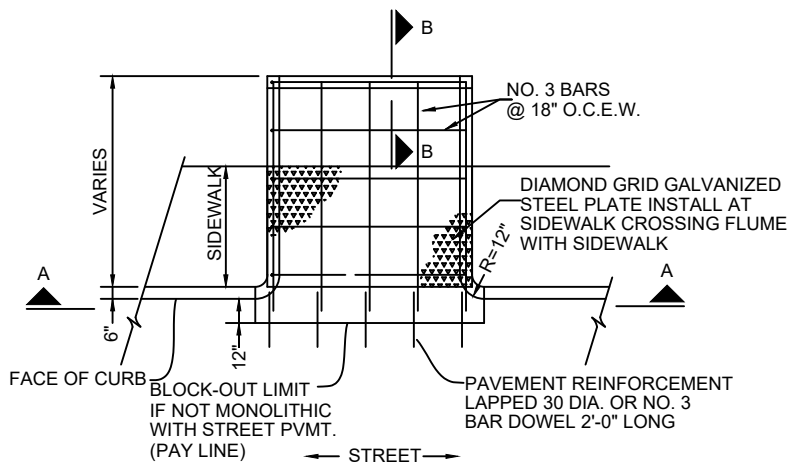
DESIGNED: E.W.D.	DATE: 6-12-15
DRAWN: M.K.W.	REVISION: 04/08/2021
FILE: N:\Josephine City of\Standard Details\Standard Details 2015	



SECTION A-A



SECTION B-B

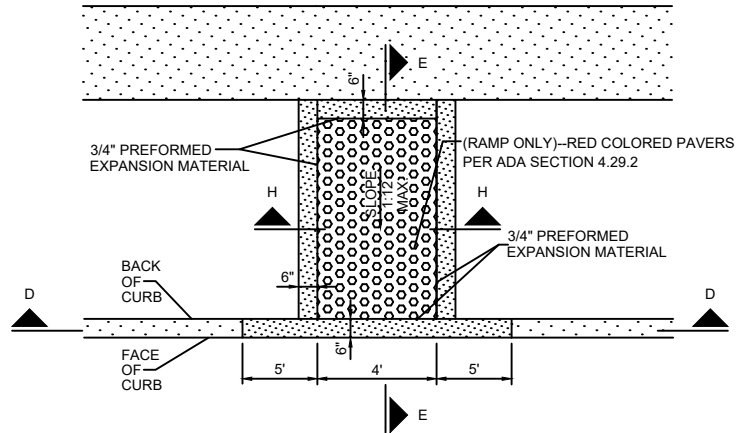


PLAN

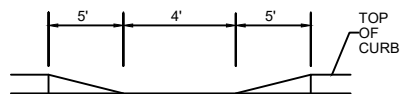
STEEL PLATE FLUME COVER

PLATE THICKNESS SHALL BE 5/8 INCHES
BASE ON 100 P.S.I. LIVE LOAD AND MAX.
DEAD & LIVE LOAD DEFLECTION OF L/240.
BOLT PLATE DOWN WITH BRASS BOLTS.
BOLTS SHALL BE 1/2" DIA. RECESSED TO
FLUSH WITH TOP OF PLATE AND SPACED
A MAXIMUM OF 12" ON CENTERS. 1/2"
DIA. SELF-DRILLING ANCHORS SHALL BE
USED AND SPACED THE SAME. SURFACE
OF PLATE SHALL BE A NON-SKID MATERIAL.

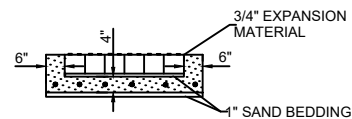
REINFORCED CONCRETE FLUME WITH CURBS



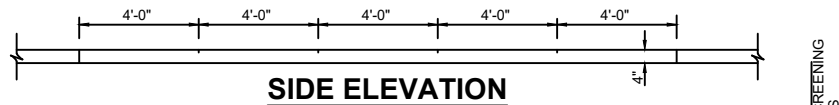
BARRIER FREE RAMP @ STRAIGHT CURB



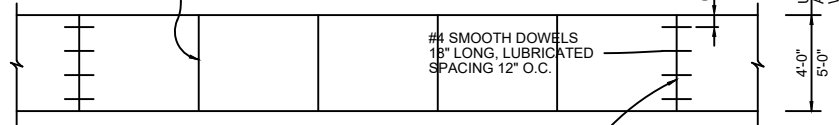
SECTION D-D



SECTION H-H

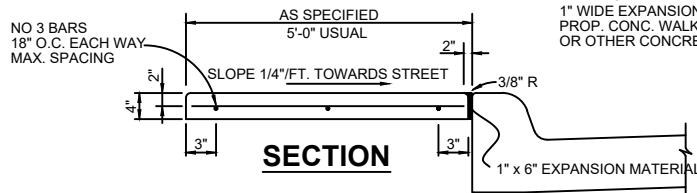


SIDEWALK MARKINGS SHALL BE GROOVED
3/8" DEEP ON 4' CENTERS



PLAN

1/2" EXPANSION JOINTS SHALL BE SPACED
AT 20' INTERVALS OR AS OTHERWISE SPECIFIED
AND JOINTS SHALL BE FILLED WITH PREMOLDED
BITUMINOUS EXPANSION JOINT FILLER AND REDWOOD.
OR
1" WIDE EXPANSION MATERIAL IS REQUIRED WHERE
PROP. CONC. WALK ABUTS WITH CONCRETE DRIVEWAY
OR OTHER CONCRETE PAVEMENT OR CURB



SECTION

REINFORCED CONCRETE SIDEWALK

STANDARD DETAILS
FOR
CITY OF JOSEPHINE
COLLIN & HUNT COUNTIES, TEXAS

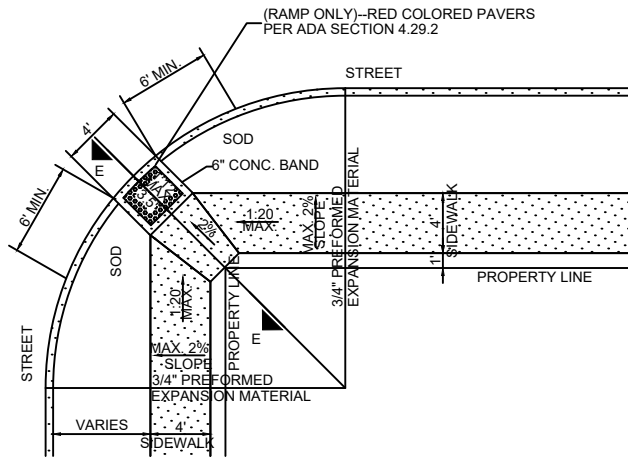
DUNAWAY IDBI

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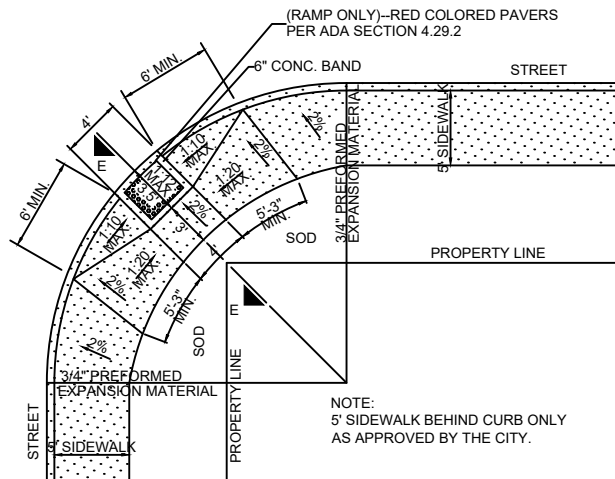
SIDEWALK DETAILS (1)



NOTE: PAVERS WILL HAVE DETECTABLE WARNING THAT CONSIST OF RAISED TRUNCATED DOMES WITH A DIAMETER OF 0.9 IN. (23MM), A HEIGHT OF NOMINAL 0.2 IN. (5MM) AND A CENTER-TO-CENTER SPACING OF NOMINAL 2.35 IN. (60MM) AND SHALL BE RED IN COLOR

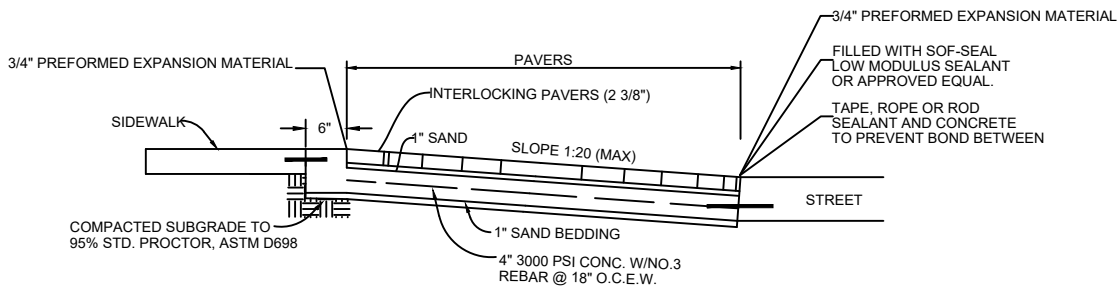
RAMP FOR 4 FEET SIDEWALK AWAY FROM CURB

NOTE: PAVERS WILL HAVE DETECTABLE WARNING THAT CONSIST OF RAISED TRUNCATED DOMES WITH A DIAMETER OF 0.9 IN. (23MM), A HEIGHT OF NOMINAL 0.2 IN. (5MM) AND A CENTER-TO-CENTER SPACING OF NOMINAL 2.35 IN. (60MM) AND SHALL BE RED IN COLOR



NOTE:
5' SIDEWALK BEHIND CURB ONLY
AS APPROVED BY THE CITY.

RAMP FOR 5 FEET SIDEWALK NEXT TO CURB



SECTION E-E

STANDARD DETAILS
FOR
CITY OF JOSEPHINE
COLLIN & HUNT COUNTIES, TEXAS

SIDEWALK DETAILS (2)

DUNAWAY IDBI

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Tel: 972.784.7777

(TXENG FIRM F-1114)

DESIGNED: E.W.D.

DATE: 6-12-15

DRAWN: M.K.W.

REVISION: 04/08/2021

FILE: N:\Josephine City of\Standard Details\Standard Details 2015

1. THE FLOOR OF THE EXCAVATION FOR INLET BOX MUST PROVIDE A FIRM, LEVEL BED FOR THE BASE SECTION TO REST UPON.
2. A MINIMUM OF 6 INCHES OF 1" DIAMETER (MAXIMUM) ROCK OR GRAVEL SHALL BE USED TO PREPARE THE BEDDING TO FINAL GRADE OR LIEU OF THIS, AT LEAST 6 INCHES OF 2-SACK CEMENT STABILIZED SAND SHALL BE USED TO PREPARE THE BEDDING TO GRADE. CEMENT STABILIZED-SAND SHALL BE ALLOWED TO SET BY KEEPING HOLE PUMPED DRY.
3. AFTER CASING HAS BEEN INSTALLED ON THE PROPER BEDDING, THE BACKFILL MATERIAL, WHICH IS FREE FLOWING AND CLEAR OF ROCKS, IN EXCESS OF 4" DIAMETER AND OTHER LUMPS WHICH WOULD PROHIBIT PROPER COMPACTION, SHALL BE COMMENCED IN LIFTS OF NO MORE THAN 18". THE MATERIAL USED FOR BACKFILL SHOULD BE A TYPE SUITABLE TO OBTAIN THE DENSITY REQUIREMENTS FOR THE SPECIFIC JOB.

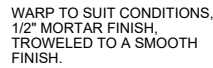


SECTION C-C

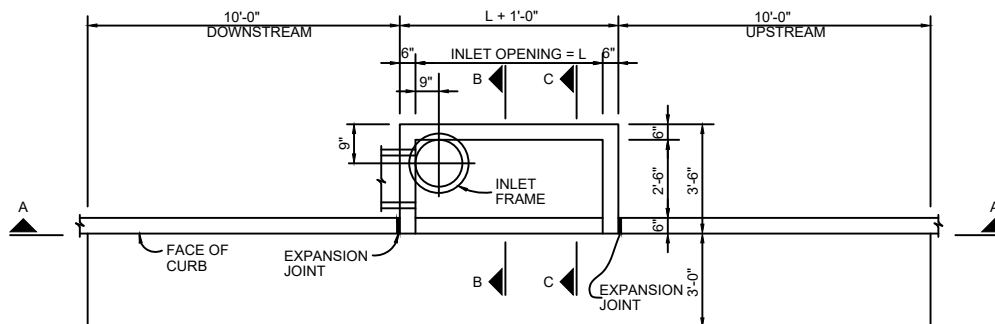


SECTION E-E

1. THE FLOOR OF THE EXCAVATION FOR INLET BOX MUST PROVIDE A FIRM, LEVEL BED FOR THE BASE SECTION TO REST UPON.
2. A MINIMUM OF 6 INCHES OF 1" DIAMETER (MAXIMUM) ROCK OR GRAVEL SHALL BE USED TO PREPARE THE BEDDING TO FINAL GRADE OR LIEU OF THIS, AT LEAST 6 INCHES OF 2-SACK CEMENT STABILIZED SAND SHALL BE USED TO PREPARE THE BEDDING TO GRADE. CEMENT STABILIZED-SAND SHALL BE ALLOWED TO SET BY KEEPING HOLE PUMPED DRY.
3. AFTER CASING HAS BEEN INSTALLED ON THE PROPER BEDDING, THE BACKFILL MATERIAL, WHICH IS FREE FLOWING AND CLEAR OF ROCKS, IN EXCESS OF 4" DIAMETER AND OTHER LUMPS WHICH WOULD PROHIBIT PROPER COMPACTION, SHALL BE COMMENCED IN LIFTS OF NO MORE THAN 18". THE MATERIAL USED FOR BACKFILL SHOULD BE A TYPE SUITABLE TO OBTAIN THE DENSITY REQUIREMENTS FOR THE SPECIFIC JOB.

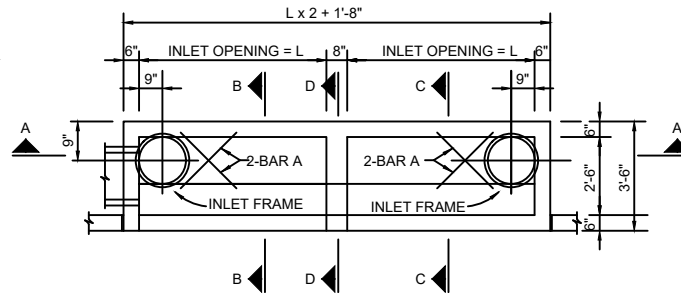


NOTE:
PIPES SHALL CONNECT TO
THE ENDS OR SIDES OF
INLETS CONNECTION SHALL
NOT BE MADE AT CORNER
OR BOTTOM.



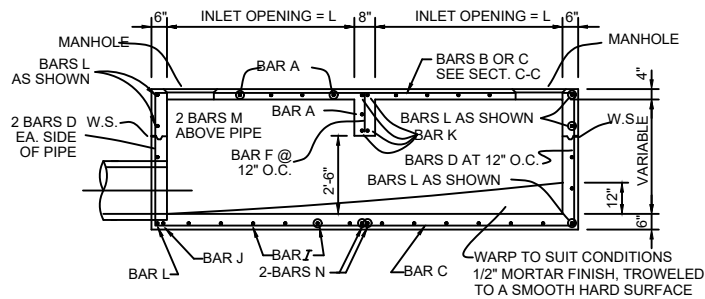
4, 6, 8 AND 10 FOOT INLETS

NOTE:
REINFORCING SHOWN IS
ADDITIONAL FOR SPECIAL
CONDITION, FOR REMAINDER
OF REINFORCEMENT, SEE
SECTIONS.



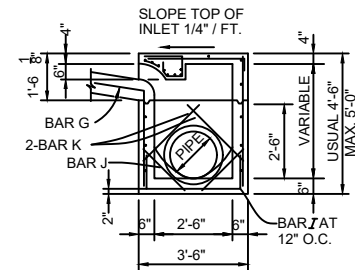
PLAN

20 FOOT INLETS

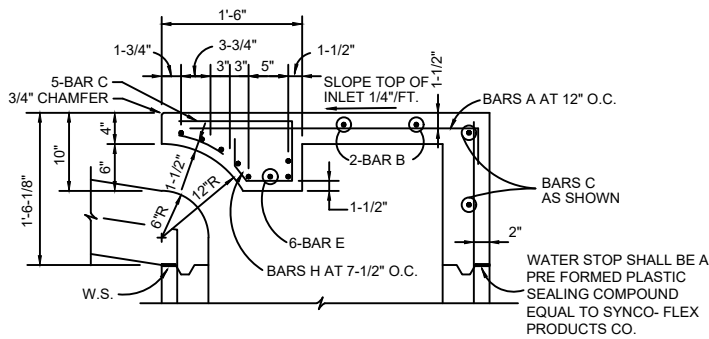


SECTION A-A

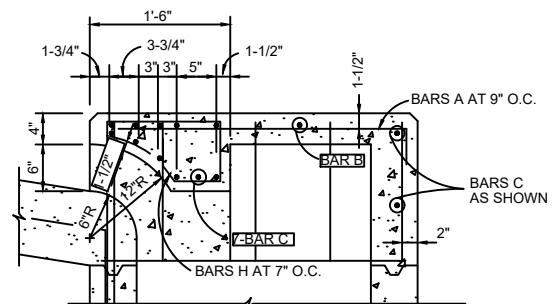
12, 14, 16 AND 20 FOOT INLETS



SECTION B-B



SECTION C-C



SECTION D-D

STANDARD DETAILS
FOR
CITY OF JOSEPHINE
COLLIN & HUNT COUNTIES, TEXAS

CURB INLET DETAILS (3)

DUNAWAY IDBI

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(TXENG FIRM F-1114)

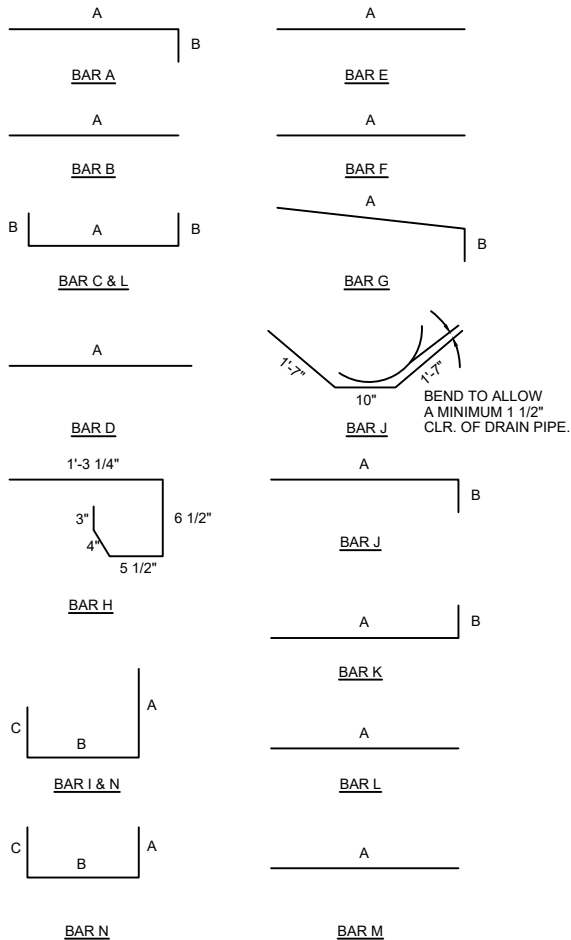
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DATE: 6-12-15

DRAWN: M.K.W.

REVISION: 04/08/2021

FILE: N:\Josephine City of\Standard Details\Standard Details 2015



BAR DIAGRAMS

REINFORCING STEEL SCHEDULE

DIMENSIONS SHOWN ARE FOR MAXIMUM SIZE INLETS

INLET LENGTH	BAR TYPE	BAR DIA. (1/8 IN.)	NO. REQ'D	BAR DIMENSIONS		
				A	B	C
4	A	3	6	3'-2"	0'-3"	-
	B	3	1	2'-10"	-	-
	C	4	15	4'-8"	0'-6"	-
	D	4	5	4'-8"	-	-
	F	4	1	3'-2"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	6	*	*	*
	N	3	3	3'-2"	3'-2"	3'-2"
6	A	3	9	3'-2"	0'-3"	-
	B	3	1	4'-10"	-	-
	C	4	15	6'-8"	0'-6"	-
	D	4	5	4'-8"	-	-
	F	4	1	3'-2"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	9	*	*	*
	N	3	3	3'-2"	3'-2"	3'-2"
8	A	3	12	3'-2"	0'-3"	-
	B	4	1	6'-10"	-	-
	C	4	15	8'-8"	0'-6"	-
	D	4	5	4'-8"	-	-
	F	4	1	3'-2"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	12	*	*	*
	N	3	3	3'-2"	3'-2"	3'-2"
10	A	3	13	3'-2"	0'-3"	-
	B	3	2	8'-10"	-	-
	C	4	16	10'-8"	0'-6"	-
	D	4	4	4'-8"	-	-
	E	5	6	10'-8"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	14	*	*	*
	I	4	8	4'-8"	3'-2"	3'-2"
	L	4	5	4'-3"	-	-

* SEE DIAGRAM FOR DIMENSIONS.
4', 6', 8' AND 10' INLETS

DOUBLE INLETS

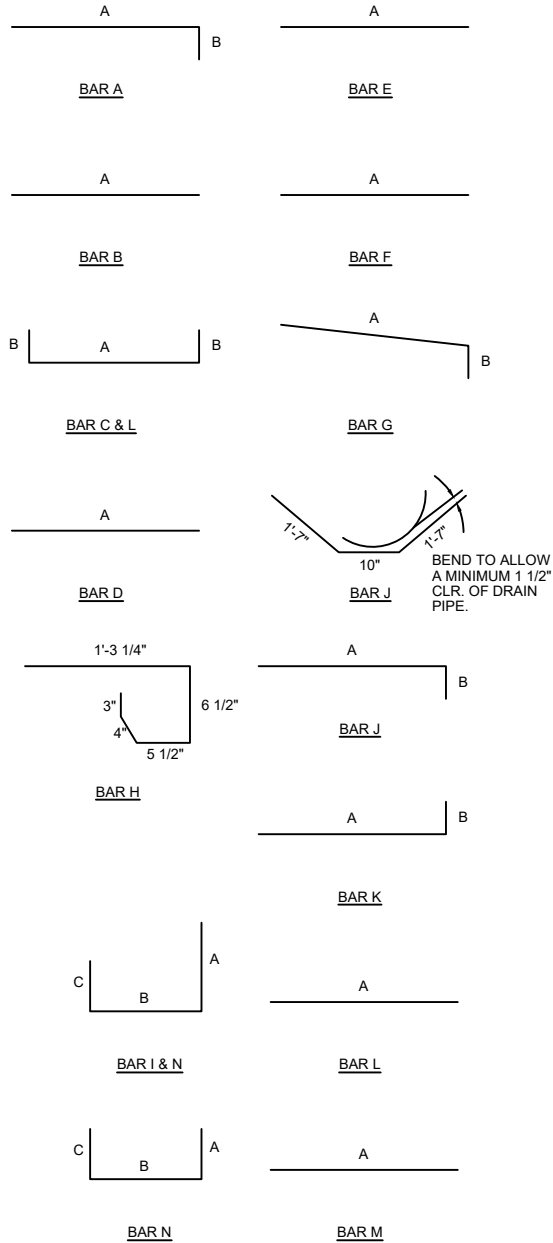
DIMENSIONS SHOWN ARE FOR MAXIMUM SIZE INLETS

INLET LENGTH	BAR TYPE	BAR DIA. (1/8 IN.)	NO. REQ'D	BAR DIMENSIONS		
				A	B	C
6 FT.	A	3	15	3'-2"	0'-6"	-
	B	3	2	11'-6"	-	-
	C	4	16	13'-4"	0'-6"	-
	D	4	9	4'-8"	-	-
	E	5	6	13'-4"	-	-
	F	4	5	1'-2"	-	-
	G	3	12	2'-0"	1'-3"	-
	H	3	26	*	*	*
	I	4	12	4'-8"	3'-2"	3'-2"
	J	5	1	*	*	*
	K	5	6	3'-2"	0'-6"	-
	L	4	11	3'-2"	0'-6"	-
	M	4	2	3'-0" **	-	-
	N	4	2	4'-8"	3'-2"	4'-8"
7 FT.	A	3	17	3'-2"	0'-6"	-
	B	3	2	13'-6"	-	-
	C	4	16	15'-4"	0'-3'	-
	D	4	9	4'-8"	-	-
	E	5	6	15'-4"	-	-
	F	4	5	1'-2"	-	-
	G	3	15	2'-0"	1'-3"	-
	H	3	32	*	*	*
	I	4	14	4'-8"	3'-2"	3'-2"
	J	5	1	*	*	*
	K	5	6	3'-2"	0'-6"	-
	L	4	11	3'-2"	0'-6"	-
	M	4	2	3'-0" **	-	-
	N	4	2	4'-8"	3'-2"	4'-8"
8 FT.	A	3	19	3'-2"	0'-6"	-
	B	3	2	15'-6"	-	-
	C	4	16	17'-4"	0'-6"	-
	D	4	9	4'-8"	-	-
	E	5	6	17'-4"	-	-
	F	4	5	1'-2"	-	-
	G	3	12	2'-0"	1'-3"	-
	H	3	26	*	*	*
	I	4	16	4'-8"	3'-2"	3'-2"
	J	5	1	*	*	*
	K	5	6	3'-2"	0'-6"	-
	L	4	11	3'-2"	0'-6"	-
	M	4	2	3'-0" **	-	-
	N	4	2	4'-8"	3'-2"	4'-8"
10 FT.	A	3	23	3'-2"	0'-6"	-
	B	3	2	19'-6"	-	-
	C	4	16	21'-4"	0'-6"	-
	D	4	9	4'-8"	-	-
	E	5	6	21'-4"	-	-
	F	4	5	1'-2"	-	-
	G	3	15	2'-0"	1'-3"	-
	H	3	32	*	*	*
	I	4	20	4'-8"	3'-2"	3'-2"
	J	5	1	*	*	*
	K	5	6	3'-2"	0'-6"	-
	L	4	11	3'-2"	0'-6"	-
	M	4	2	3'-0" **	-	-
	N	4	2	4'-8"	3'-2"	4'-8"

* SEE DIAGRAM FOR DIMENSIONS.

** FIELD CUT AS REQUIRED TO ACCOMMODATE DRAIN PIPE
16' AND 20' INLETS

REINFORCING STEEL SCHEDULE

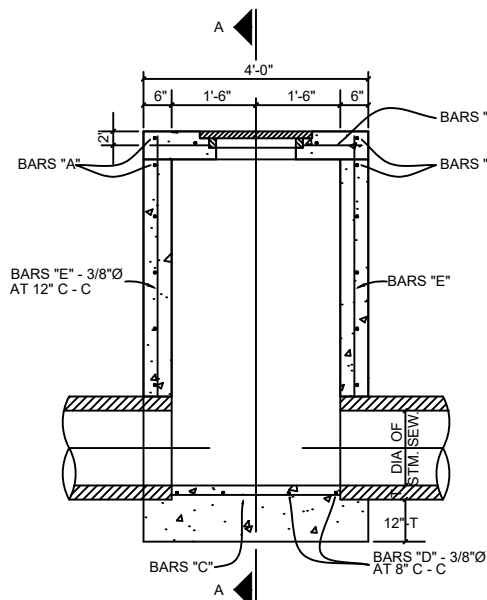


△ BEND TO ALLOW A MINIMUM 1 1/2" CIR. OF DRAIN PIPE

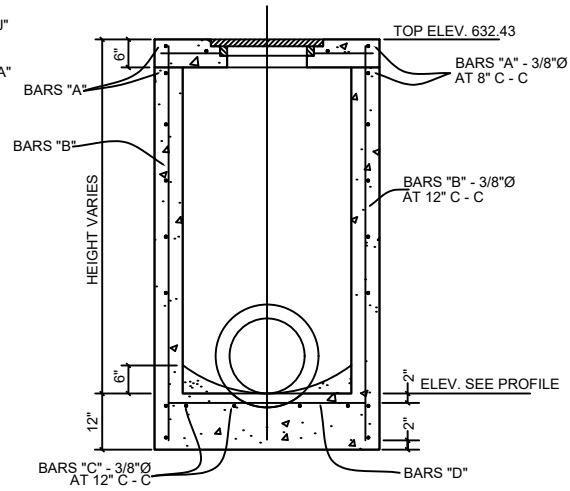
* SEE DIAGRAMS FOR DIMENSIONS

** FIELD CUT AS REQUIRED TO ACCOMMODATE DRAIN PIPE

BAR BENDING DIAGRAM



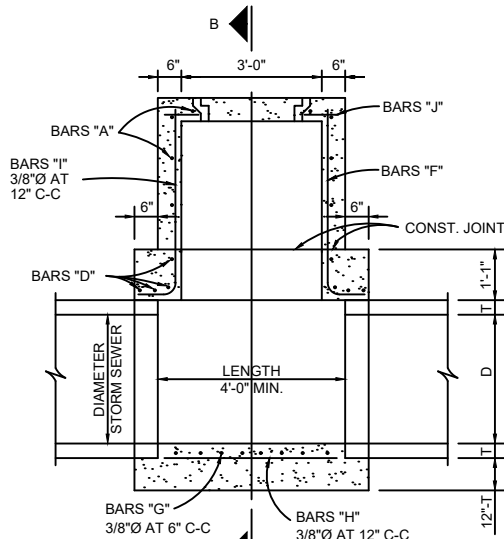
ELEVATION



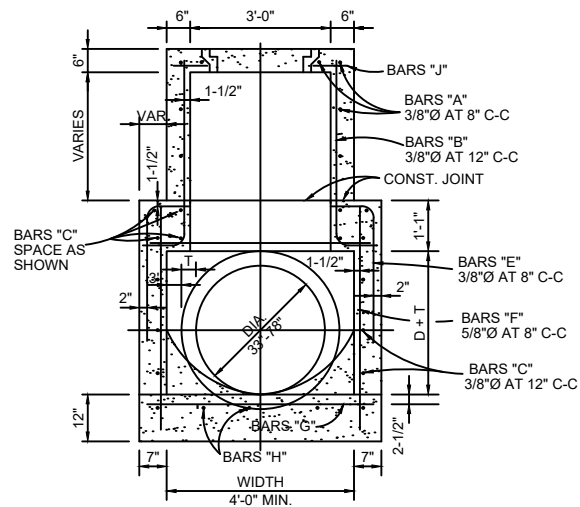
SECTION A-A

STORM SEWER TYPE A MANHOLE

MAX. PIPE SIZE 30"



ELEVATION



SECTION B-B

TYPE B STORM SEWER MANHOLE

MAX. PIPE SIZE 78"

STANDARD DETAILS
FOR
CITY OF JOSEPHINE
COLLIN & HUNT COUNTIES, TEXAS

DUNAWAY IDBI

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(TXENG FIRM F-1114)

DESIGNED: E.W.D.

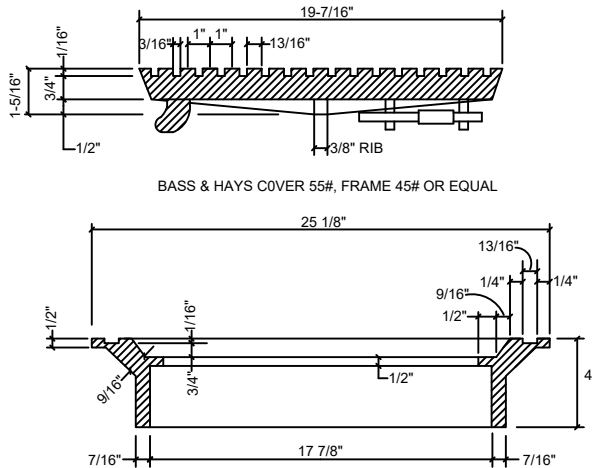
DATE: 6-12-15

DRAWN: M.K.W.

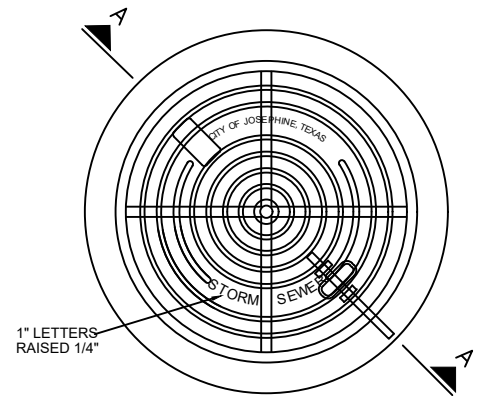
REVISION: 04/08/2021

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STORM SEWER MANHOLE DETAILS (1)

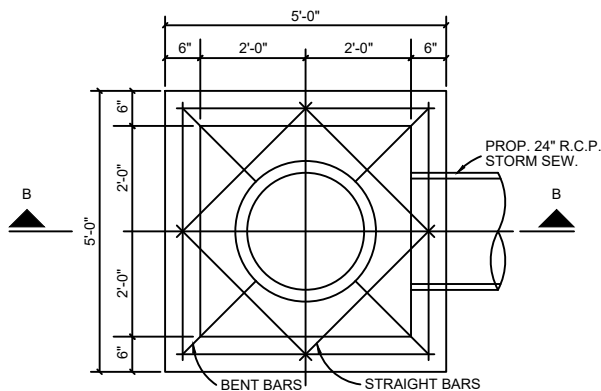


**SECTION OF FRAME AND COVER SECTION A-A
INLET FRAME AND COVER**

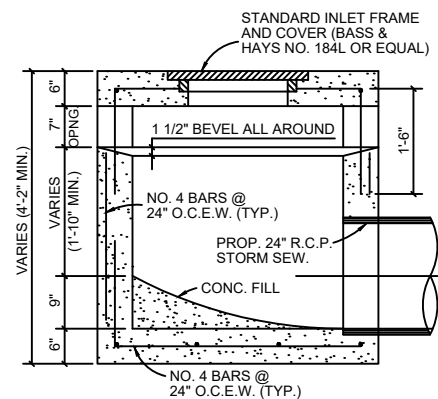


PLAN OF COVER

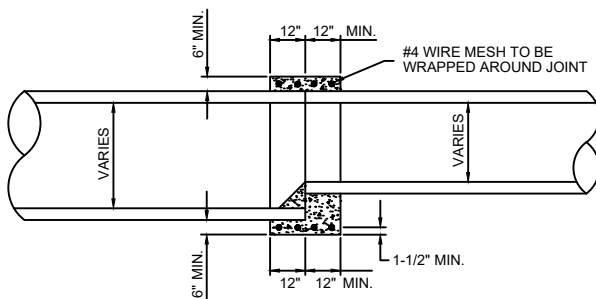
NOTE: MANHOLE COVER TO INCLUDE
LOCKING DEVICE



PLAN STANDARD DROP INLET



SECTION B-B

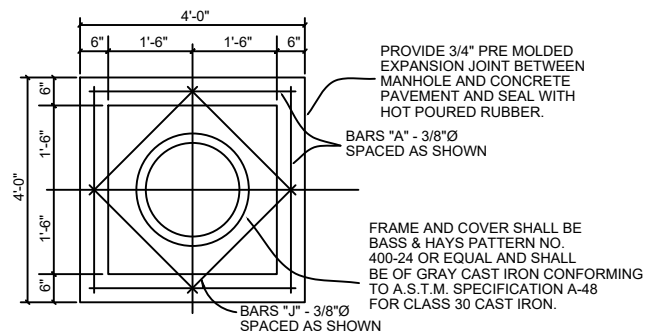


**DETAIL OF CONCRETE COLLAR
FOR R.C.P. OR R.C.A.P. CONNECTIONS**

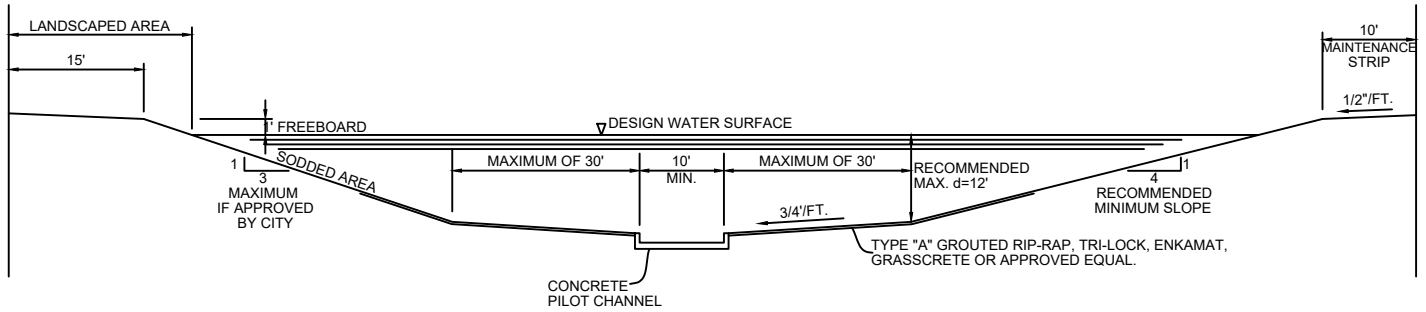
INSIDE JOINT SHALL BE CONCRETE MORTAR

STORM SEWER MANHOLE NOTES:

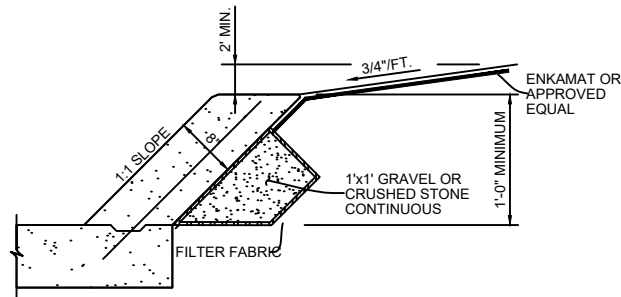
1. PRECAST MANHOLE RISERS SHALL BE USED UNLESS SPECIAL PERMISSION IS GRANTED BY THE CITY FOR CAST-IN-PLACE RISERS.
2. PRECAST MANHOLE RISERS SHALL BE CLASS III R.C.P. FOR ALL MANHOLES UNDER 25 FT. DEEP AND CLASS IV R.C.P. FOR MANHOLES OVER 25 FT. DEEP.
3. MANHOLE BASE MAY BE PRECAST FOR PIPES LESS THAN 30" AND MAY BE PRECAST FOR PIPES 30" AND LARGER WITH PERMISSION GRANTED BY THE CITY.



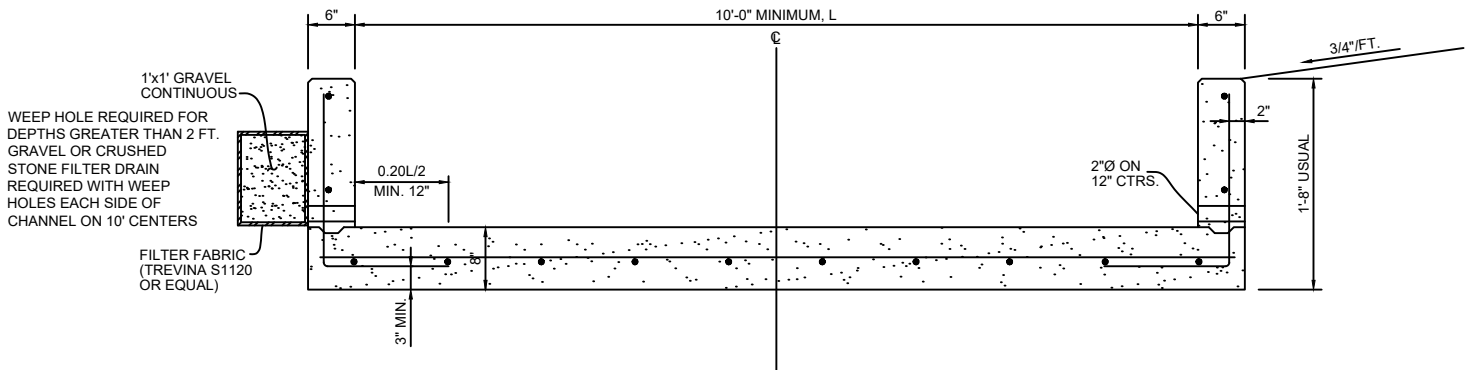
**TYPE A & TYPE B
STORM SEWER MANHOLE**



TYPICAL CHANNEL WITH REINFORCED CONCRETE LINED PILOT CHANNEL



OPTIONAL (SLOPED WALL)



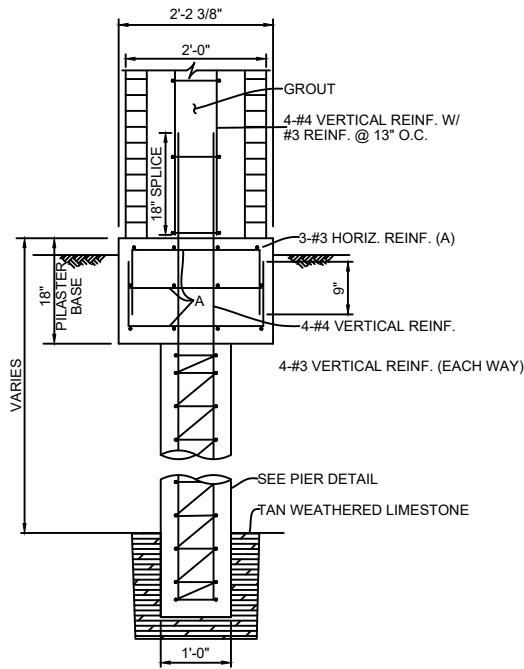
REINFORCED CONCRETE PILOT CHANNEL (VERTICAL WALL)

GENERAL NOTES FOR LINED CHANNELS

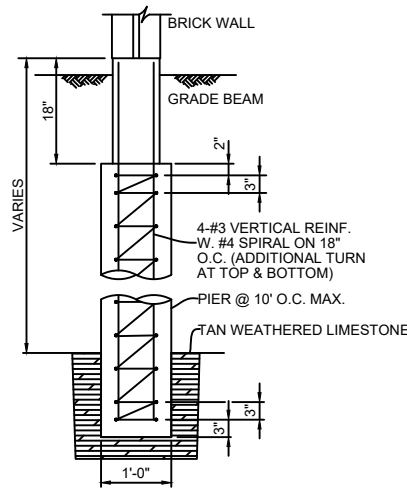
1. CONSTRUCTION JOINT SHOWN FOR CONVENIENCE ONLY, MONOLITHIC CONSTRUCTION MAY BE USED.
2. ALL VISIBLE SURFACES SHALL BE A TROWEL FINISH.
3. ALL REINFORCING STEEL SHALL BE 3/8" DIA. AND SPACED 12" CENTER TO CENTER BOTH WAYS UNLESS OTHERWISE SPECIFIED.
4. IF WOOD FORMS ARE USED WITH CONSTRUCTION JOINT, THEY SHALL BE TWO, 2"x4". AND SHALL NOT BE REMOVED UNTIL CONCRETE ON SLOPES IS READY TO BE PLACED.
5. ALL CONCRETE IN LINED CHANNEL SHALL BE NCTCOG CLASS "A" (MIN. 3000 P.S.I.) CONCRETE.
6. LAT BOTTOM TO BE CONSTRUCTED WHEN CHANNEL WIDTH IS LESS THAN 12 FOOT.
7. 3/4" CHAMFER ON ALL CONCRETE CORNERS.

GENERAL NOTES:

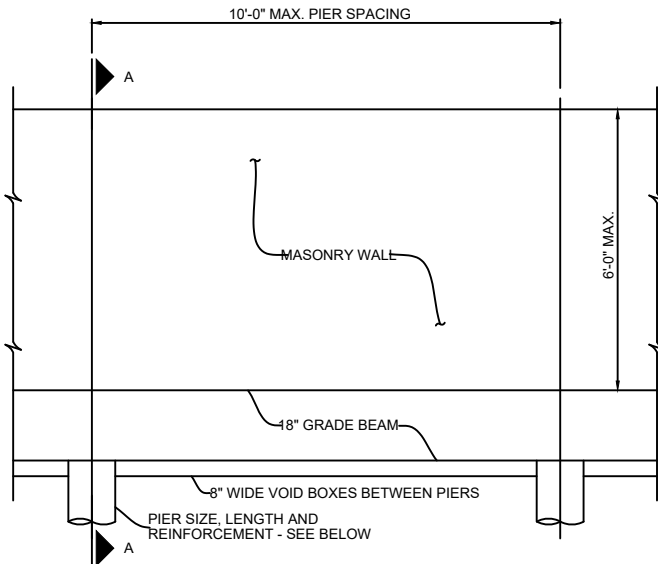
1. CONCRETE - MINIMUM COMPRESSIVE STRENGTH OF 3000 P.S.I. AT 28 DAYS.
2. REINFORCEMENT - ASTM A 36
3. MASONRY - COMPRESSIVE STRENGTH SHALL BE AS PRESCRIBED IN ITEM 2.3.6 SPECIAL PROVISIONS.
4. WIND LOAD - 20 P.S.F.
5. PIER BEARING STRESSES - SEE BRICK SCREENING WALL NOTES.
6. MORTAR - TYPE "S"
7. PROVIDE CONTROL JOINTS AT 50 FT.
8. PROVIDE EXPANSION JOINTS AT 200 FT. CENTER MAXIMUM.
9. PROVIDE MIN. 9' FT. W/ 24" DIA. BELL IN CLAY OR OTHER MATERIAL EXCEPT BLUE SHALE, 6' MIN. WITH 3' MIN. INTO BLUE SHALE.
10. ALL EXPOSED CONCRETE SHALL BE RUBBED FINISHED SURFACE.
11. SIDEWALKS ADJACENT TO WALLS MUST BE 5'-0" MIN. WIDTH FROM ALL PORTIONS OF THE WALL (INCLUDING PILASTERS, COLUMNS, ETC.).
12. MAX. PILASTER SPACING 40 FT.
13. WALLS SHALL NOT BE PLACED IN THE VISIBILITY EASEMENT OR STREET R.O.W.
14. THE WALL SHALL BE A MINIMUM OF SIX FEET IN HEIGHT AS MEASURED FROM THE NEAREST ALLEY EDGE OR SIDEWALK GRADE, WHICHEVER IS THE HIGHER. THE COLOR OF THE WALL SHALL BE LIMITED TO EARTH-TONE COLORS, EXCLUDING GRAY, GREEN AND WHITE. THE COLOR OF THE WALL SHALL BE UNIFORM ON EACH SIDE OF A THOROUGHFARE FOR THE ENTIRE LENGTH BETWEEN INTERSECTING THOROUGHFARES, UNLESS OTHERWISE APPROVED BY THE ENGINEERING DEPARTMENT. THE FINISH OF THE WALL SHALL BE CONSISTENT ON ALL SURFACES.
15. IF WROUGHT IRON FENCING IS TO BE UTILIZED ON REQUIRED SCREENING, ALL WROUGHT IRON MUST BE SOLID STOCK, NO TUBULAR STEEL WILL BE ALLOWED.



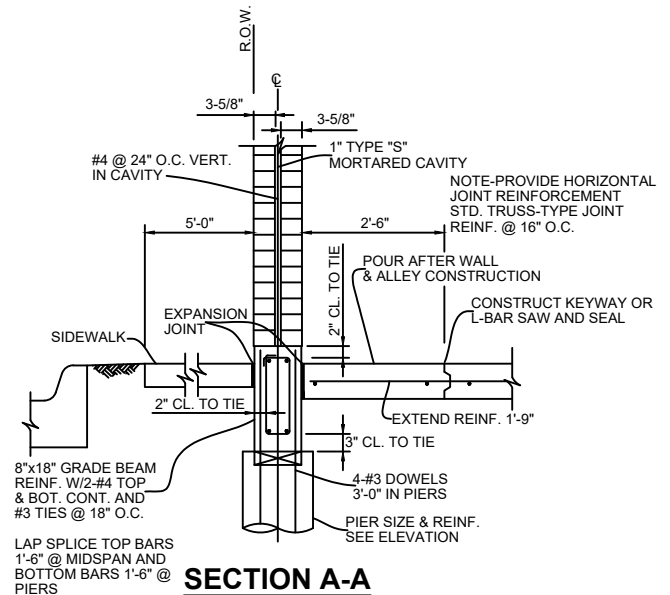
COLUMN SECTION



PIER DETAIL



ELEVATION

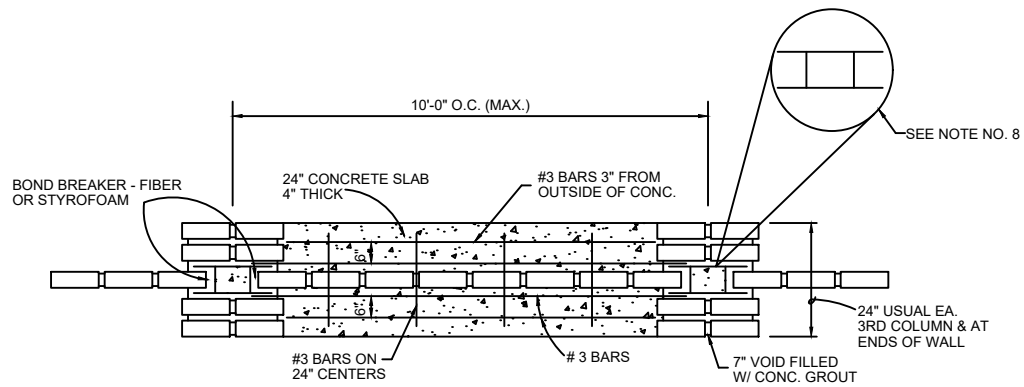


SECTION A-A

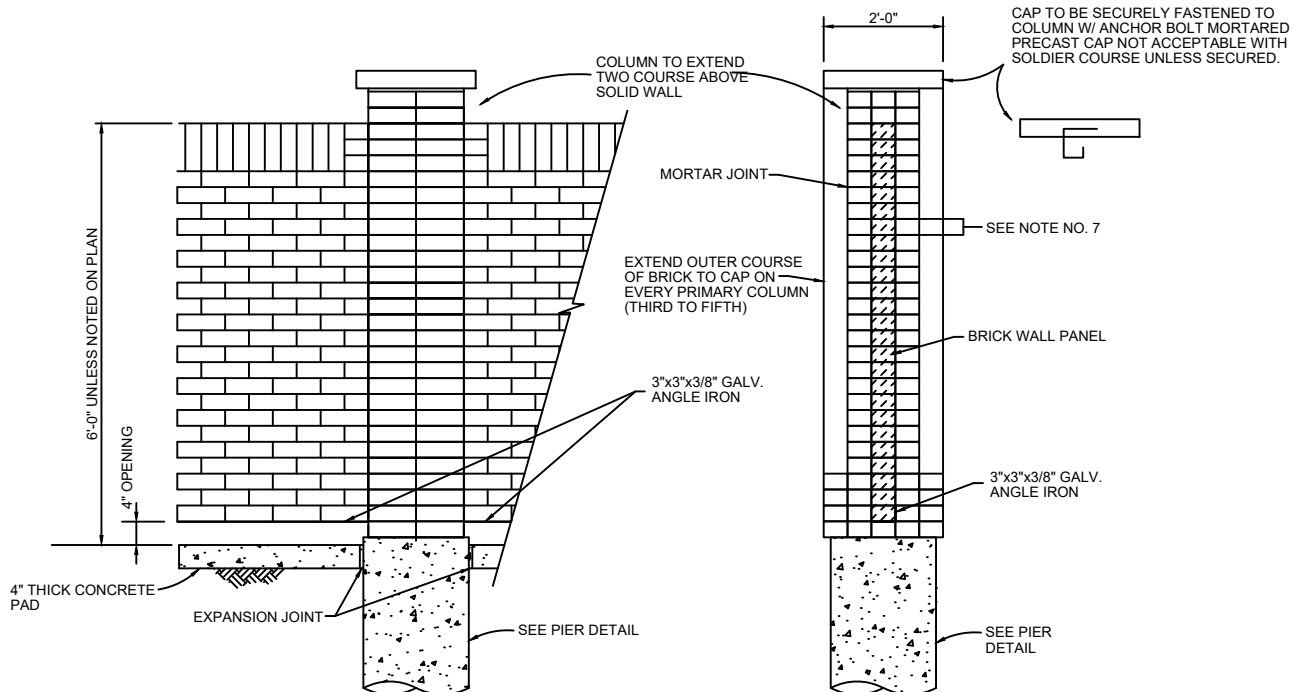
BRICK SCREENING WALL

DRILLED PIERS 12" DIA. REINF. W/ 4-#5 VERT. & #4 REINF. @ 18" O.C. MINIMUM LENGTH OF PIER IS 6'-0". *PIER BOTTOM MAY BE EITHER OF THE TWO ALTERNATES:

1. 12" DIA. SHAFT EMBEDDED MINIMUM 3'-0" INTO BLUE SHALE RESULTING BEARING STRESS IS 8.0 KIPS PER SQUARE FOOT.
2. 12" DIA. SHAFT W/ 24" DIA. BELL IN CLAY. RESULTING BEARING STRESS IN 2.0 KIPS PER SQUARE FOOT. * SEE GENERAL NO. 9



TYPICAL WALL & COLUMN LAYOUT PLAN



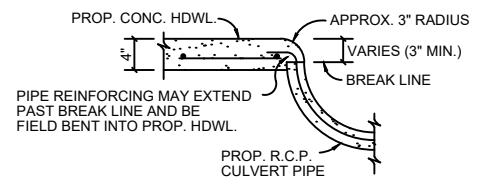
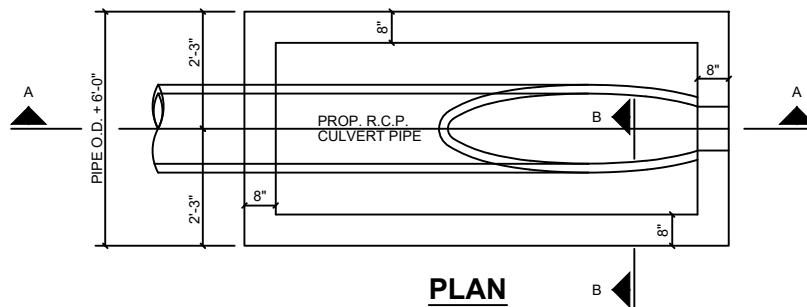
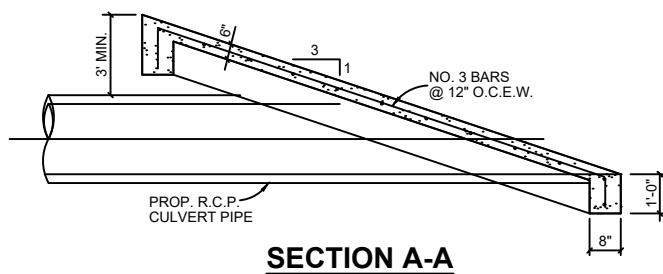
THIN WALL BRICK SCREENING WALL ELEVATION

NOTES:

1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 P.S.I. AT 28 DAYS.
2. REINFORCING STEEL SHALL BE NEW BILLET STEEL CONFORMING TO THE REQUIREMENTS OF ASTM A-615-GR. 60.
3. CONCRETE FOR DRILLED PIERS SHALL BE PLACED WITHIN 8 HOURS OF DRILLING PIER HOLES.
4. BRICK MASONRY SHALL BE AS SPECIFIED IN ITEM 2.3.6 OF THE SPECIAL PREVISIONS.
5. MORTAR SHALL BE TYPE "S".
6. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE "RECOMMENDED PRACTICE FOR ENGINEERED BRICK MASONRY"-- BRICK INSTITUTE OF AMERICA.
7. USE #9 GAUGE 1-3/4" WIDE GALVANIZED LADDER WIRE TO EXTEND HORIZONTAL IN WALL PANEL DURAWALL CORP. EVERY COURSE.
8. #9 GAUGE WIRE FABRICATED AS SHOWN BETWEEN EACH COURSE OF COLUMN BRICK.
9. THE WALL SHALL BE A MINIMUM OF SIX FEET IN HEIGHT AS MEASURED FROM THE NEAREST ALLEY EDGE OR SIDEWALK GRADE, WHICHEVER IS HIGHER. THE COLOR OF THE WALL SHALL BE SELECTED BY THE CITY.



SCREENING WALL DETAILS (3)



SLOPED CONCRETE HEADWALL

