

GENERAL NOTES:

- The Contractor shall comply with all applicable safety regulations. All construction shall be completed following current City Standard Specifications and Special Provisions.
- Contractor will be required to provide notice to utility companies a minimum of seventy-two (72) hours prior to any excavation, as follows:
Kansas One-Call 687-2470
The Contractor must notify the following in case of an emergency:
AT&T 1-800-246-8464
Black Hills Energy 1-800-694-8989
City of Wichita Water 1-316-268-4555
City of Wichita Sewer 1-316-268-4073
City of Wichita Stormwater 1-316-268-4090
City of Wichita Traffic 1-316-268-4034
Cox Communications 1-888-249-3530
Kansas Gas Service 1-888-482-4950
Westar Energy 1-800-544-4857
- Utility service lines, poles, valve boxes, meters, and etcetera are to be adjusted as necessary by others prior to construction unless the plans specifically call for their adjustment by the Contractor or unless the plans specifically identify a utility to be adjusted by its owner during construction. Existing utilities and their location, as shown on the plans, represent the best information obtainable for design. The Contractor will be required to work around existing utilities within the right-of-way which do not conflict with proposed construction.
- Rubble from the removal of miscellaneous structures and excess excavation which is to be wasted shall be disposed of on sites to be provided by the Contractor. These sites shall be approved by the Engineer as to suitability, appearance and site location. Locations, in the opinion of the Engineer, that will leave an unsightly appearance will not be approved. All disposal sites must be approved by the Kansas Department of Health and Environment. Material either stockpiled or disposed of in a flood plain would require a Kansas State Board of Agriculture permit. Any material dumped in waters of the United States or wetlands is subject to U.S. Corps. of Engineers permitting regulations. Any material buried or stockpiled beyond approved construction limits would require additional archaeological investigations unless buried in a previously approved borrow location.
- Trees and shrubs in public right-of-way which are in direct conflict with proposed new construction shall be removed by the Contractor with the Engineer's approval. Trees and shrubs which are not in direct conflict with proposed new construction shall be saved and protected from damage. See Sheet 5 for additional information.
- The Contractor shall give all property owners and/or tenants of developed property abutting the construction of this project a minimum of ten (10) days notice prior to start of construction.
- The Contractor shall be responsible for preserving property irons. The Contractor will be required to re-establish any property irons which are damaged or destroyed by his construction operations. Such irons shall be re-established by a licensed land surveyor in accordance with state laws.
- The Water Distribution Division shall field locate water valve one time during construction when requested by the Contractor. It shall be the Contractor's responsibility to preserve such field locations during the construction process. Water valves, valve boxes or fire hydrants damaged during construction shall be repaired by Contractor at his own expense. Valve boxes and water meters within the project limits shall be adjusted to match field grades.
- The Contractor shall notify the consultant engineer and Tom Mason with the City at 316-268-4574 with the anticipated construction start date and notify them of project completion. Staking and inspection for this project will be the responsibility of the Contractor.
- If traffic is impacted by construction, a traffic control plan must be submitted and approved by the City Traffic Engineer, Brian Coon at traffic@wichita.gov before construction can begin. The Contractor shall be responsible for all traffic control measures to facilitate construction. All construction zone markings and signage shall conform to the latest version of Manual on Uniform Traffic Control Devices (MUTCD) as published by the US Dept. of Transportation, Federal Highway Administration. All costs associated with construction markings and signage shall be the Contractors responsibility.
- All elevations shown are in NAVD 88.
- All areas disturbed during construction that will not be under proposed pavement shall be restored to match existing conditions.
- A portion of excess excavated material shall be mounded around manholes which extend more than one (1) foot above the existing ground. Such mound shall be constructed with new development a six (6) foot diameter flat top with 4 to 1 side slopes down to the original ground. The elevation of the flat top of the mound shall be 0.4 foot below the top to the manhole.
- Contractor shall limit the extend of trench open overnight and weekends to less than 50 feet.
- Contractor shall provide positive drainage away from all manhole covers.
- Any sidewalk, drive approach, curb, or street pavement removed to construct project must have a pavement cut permit. 10 yr. warranty shall be provided for repair. Permits can be obtained by calling 316-268-4501 or 316-268-4480.
- The inspecting firm shall submit to the City Stormwater Maintenance Division a digital copy of the CCTV inspection of the conduits and structures following construction. The digital file formation shall be compatible with the City input template. A copy of the template is available upon request at 316-268-4090.
- All excess excavation shall remain on-site and shall be stockpiled or spread at a location determined by the engineer.
- The Contractor shall not begin work on the project until the Project Inspector is assigned and on site. Any work completed without inspection will be required to be uncovered for inspection at the Contractor's expense.
- Structure location coordinates are to the center of structure and are to be located with a coordinate datum per the provided control points.
- The City of Wichita shall own and maintain Line 1 from Sta. 0+00 to Sta. 2+10.5 including the structure at Sta. 2+10.5. All of the plastic pipe and rainleader inlets after Sta. 2+10.5 through Sta. 6+13.3 shall be owned and maintained privately.

STORMWATER SEWER IMPROVEMENTS

to serve

Waterfront 7th Addition

Private Project Drainage: 0374 PPD (607861)

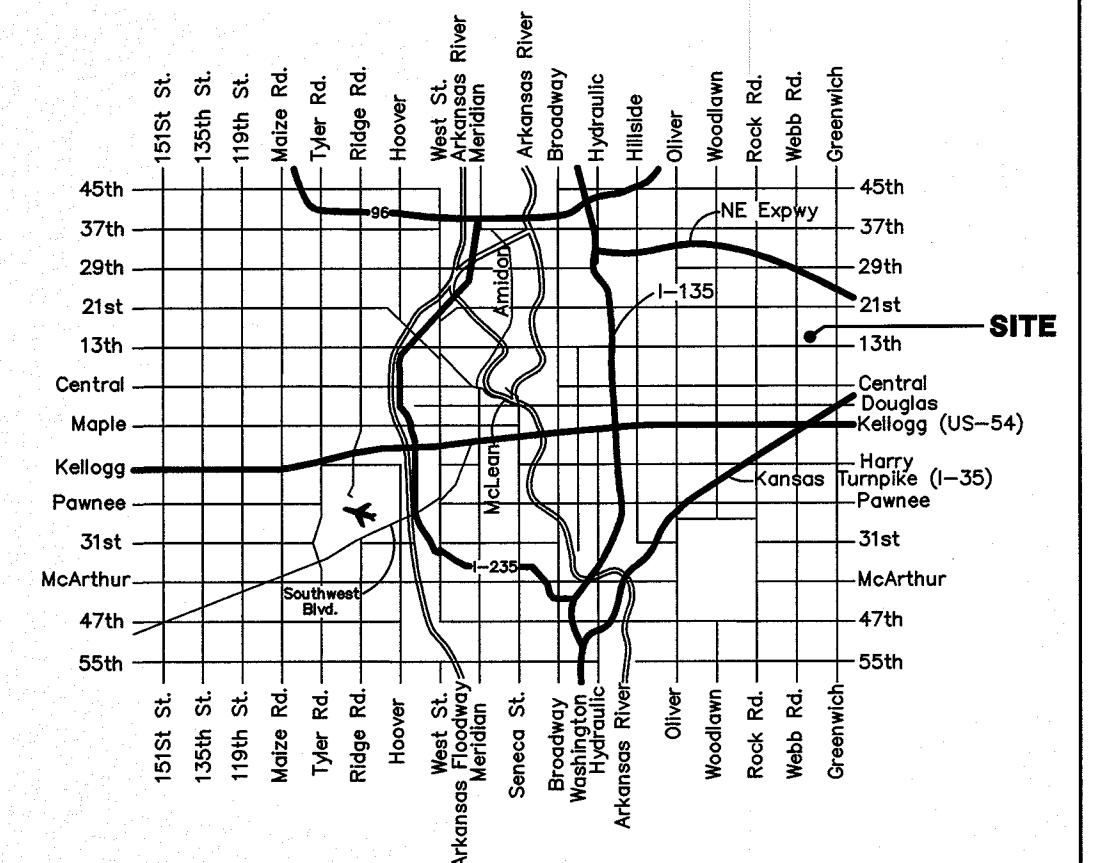
CITY OF WICHITA, KANSAS

Gary Janzen, P.E. - City Engineer

March 2016

AS BUILT PLANS

Contractor: Pearson Excavating
Inspector: Fred Smith, Baughman Co.
pdfs by: KEK, 5/31/16

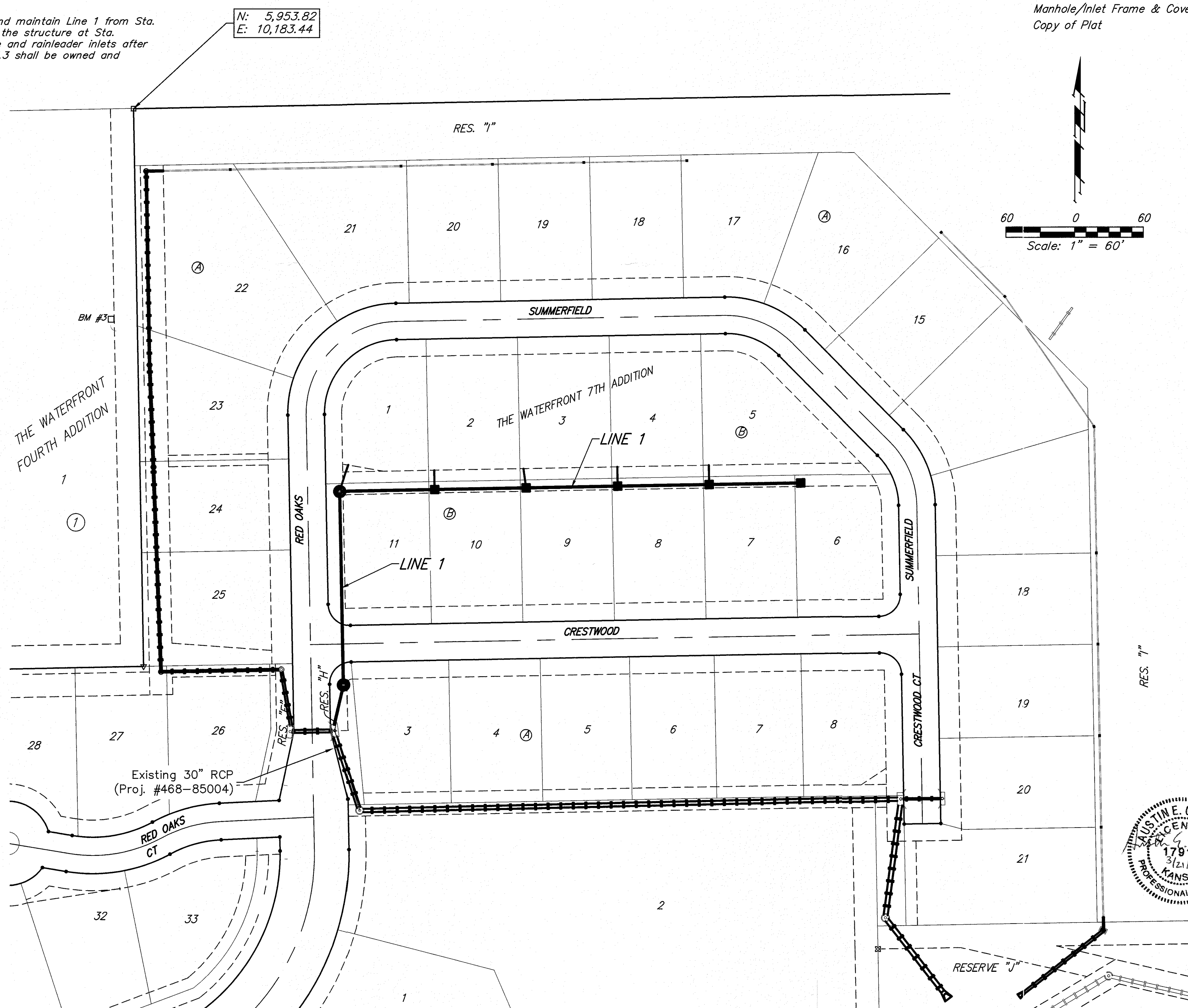


SHEET INDEX:

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Erosion Control BMP Details	5-9
Rainleader Inlet Details	10
Precast Manhole Detail	11
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VICINITY MAP

BURLINGTON NORTHERN SAN FRANCISCO RAILROAD (ABANDONED)



Storm Water Certification:
These construction plans were prepared in accordance with the current Storm Water Management Regulations as set forth in the City of Wichita's Storm Water Management Ordinance 16.32 and the policies/guidelines presented in the Wichita/Sedgwick County Storm Water Manual.
Disturbed Area = 16.1 ac.
Water Quality Treatment: Provided by existing pond in Res. "J".
Downstream Channel Protection: The site drains to existing ponds with established outfall structures, so no downstream channel protection is specifically provided for.
Detention: Provided by the existing pond in Res. "J".

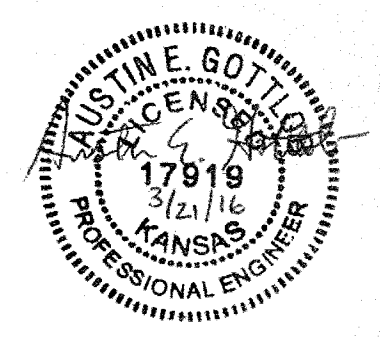
APPROVED AS NOTED
BY WICHITA PUBLIC WORKS ENGINEERING
AND STORMWATER DIVISION
Engineering *Rebeccah Dail* 3/22/2016
Stormwater *Joe Hubble P.E.* 3/22/16
NOTE TO CONTRACTORS

Installation, inspection and testing for this project is to be provided by a Licensed Consulting Engineering Firm under contract with the Owner/Developer. Said Inspection to be in accordance with the City of Wichita standard construction engineering practices and certified by a Licensed Professional Engineer in the state of Kansas. No work shall be performed the Contractor without such inspection nor shall any work be commenced without written authorization by the City Engineer. All Construction and Materials shall comply with the current City of Wichita Specifications and Standards and Special Provisions. (on file and available at Wichita.gov).

An approved copy of these plans signed by City staff are required on-site.

BENCHMARKS

- BM #1:
"□" Chiseled on Top of Curb.
West End of South Median Curb
within Castlewood
Elevation = 1380.50 (NAVD 88)
- BM #2:
"X" Chiseled on Back of Walk.
Near the Southeast corner of
Lot 2, Block A, The Waterfront
7th Addition
Elevation = 1381.88 (NAVD 88)
- "BM #3"
"□" Chiseled on Back of Walk.
Northeast corner of parking lot
within Lot 1, Block 1, The
Waterfront 4th Addition
Elevation = 1389.50 (NAVD 88)



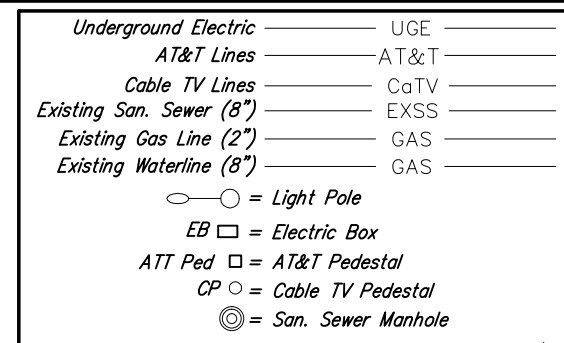
Baughman
Baughman Company, P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

BENCHMARKS

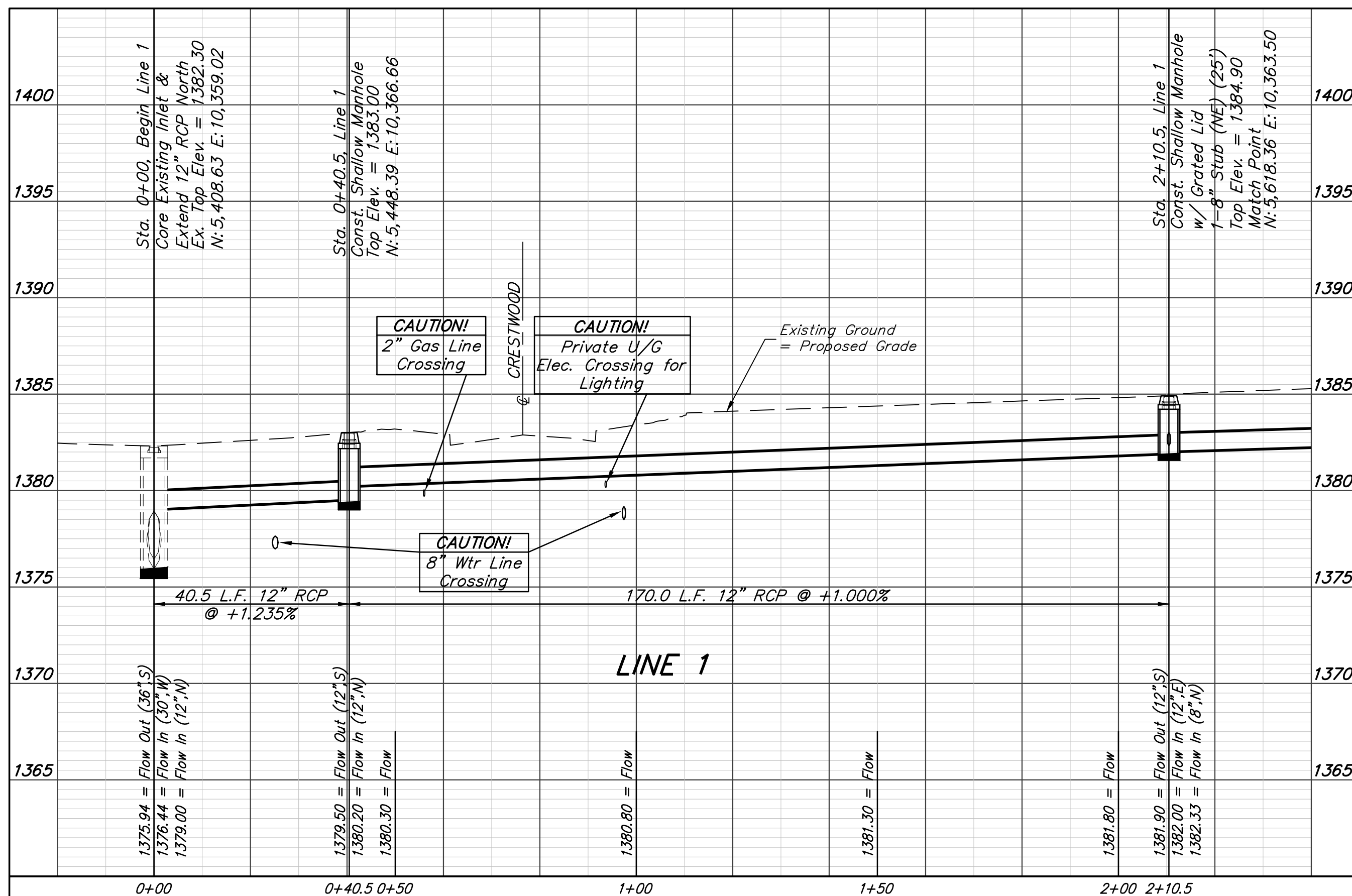
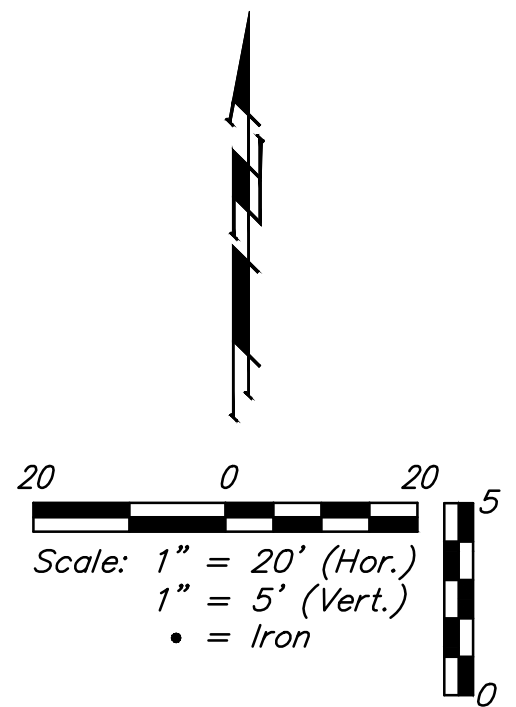
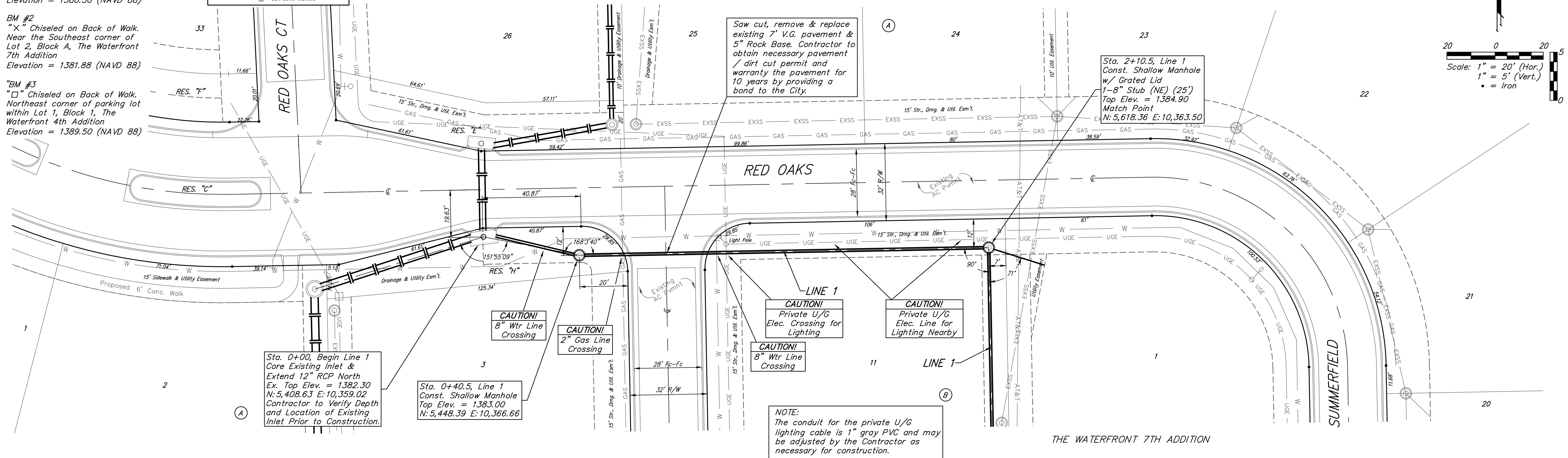
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 7th Addition
 Elevation = 1381.88 (NAVD 88)

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 Northeast corner of parking lot
 within Lot 1, Block 1, The
 Waterfront 4th Addition
 Elevation = 1389.50 (NAVD 88)



Contractor shall verify elevation and location of existing utility crossings prior to ordering any materials and report any deviation and/or conflicts from plan information to the Engineer.



Baughman The Waterfront 7th Addition
LINE 1
 Private Stormwater Sewer Improvements

Baughman Company, P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
 ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

PROJECT NUMBER	DESIGN AEG	DRAWN JAK
REVISIONS:	APPROVED	DATE 3/15/16
	SCALE Noted	SHEET

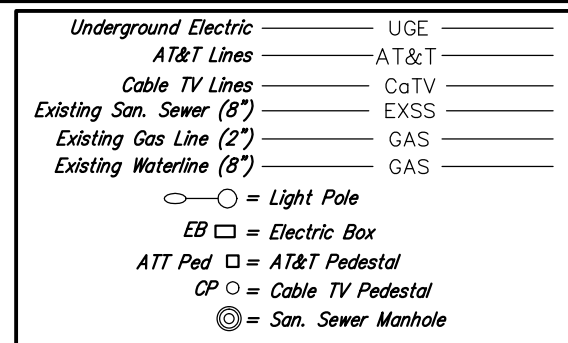
2 OF 14

BENCHMARKS

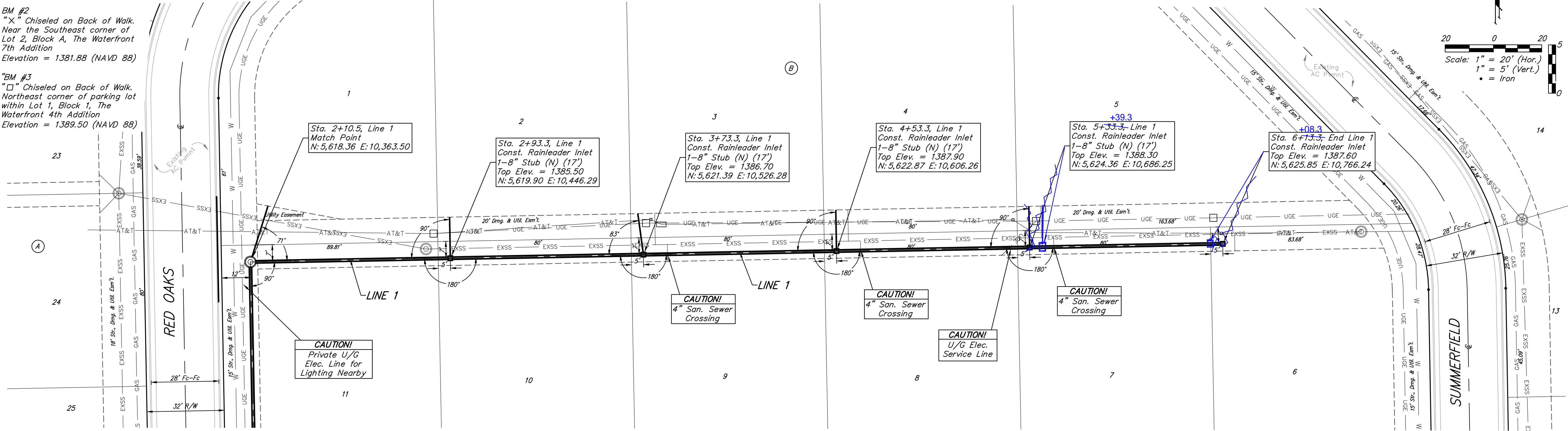
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 "X" Chiseled on Back of Walk.
 Near the Southeast corner of
 Lot 2, Block A, The Waterfront
 7th Addition
 Elevation = 1381.88 (NAVD 88)

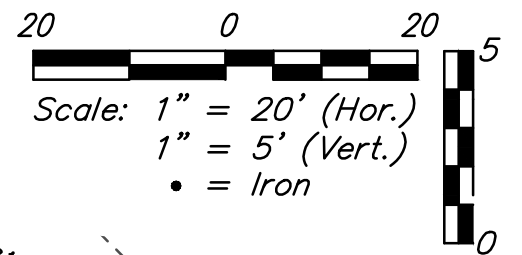
BM #3
 "□" Chiseled on Back of Walk.
 Northeast corner of parking lot
 within Lot 1, Block 1, The
 Waterfront 4th Addition
 Elevation = 1389.50 (NAVD 88)



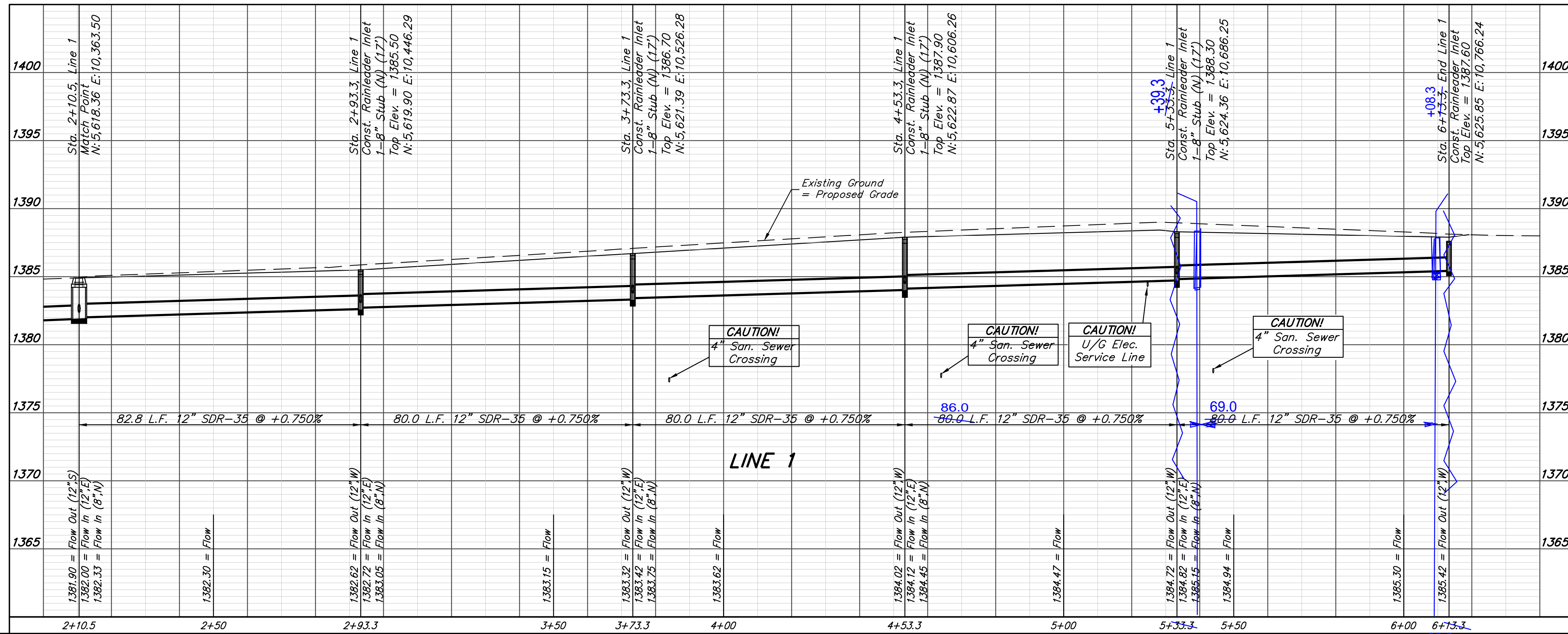
8" Stub Elevations at
 Inlets May Vary to
 Avoid Existing Utilities



THE WATERFRONT 7TH ADDITION



THE WATERFRONT 7TH ADDITION



Baughman The Waterfront 7th Addition
LINE 1
 Private Stormwater Sewer Improvements

PROJECT NUMBER: _____ DESIGN: AEG DRAWN: JAK
 APPROVED: _____ DATE: 3/15/16
 SCALE: Noted
 SHEET: **3 OF 14**

Revisions:

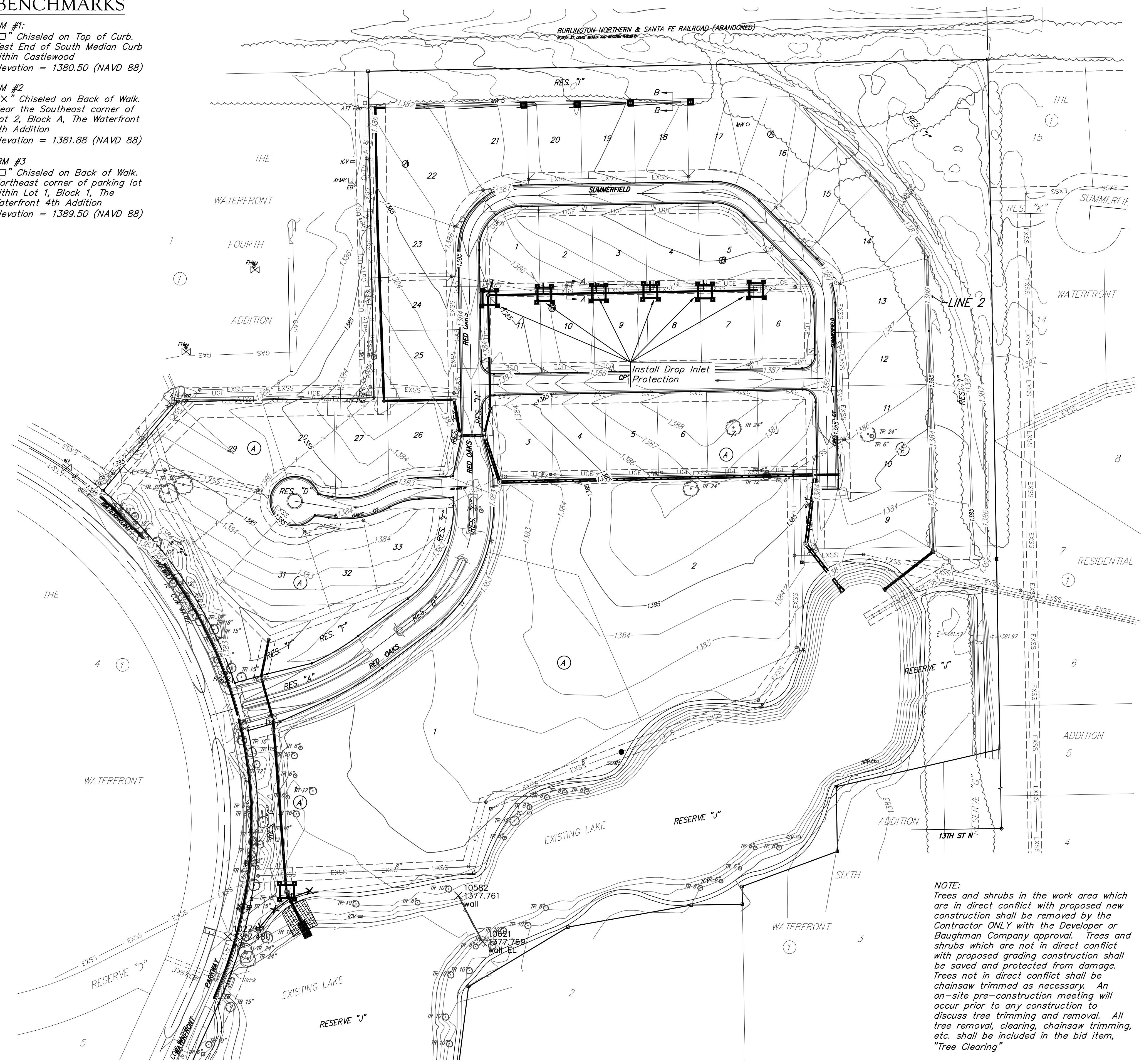
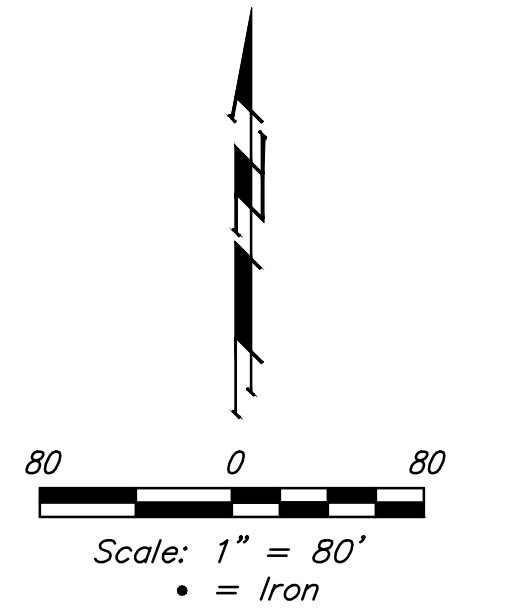
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BENCHMARKS

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7th Addition
Elevation = 1381.88 (NAVD 88)

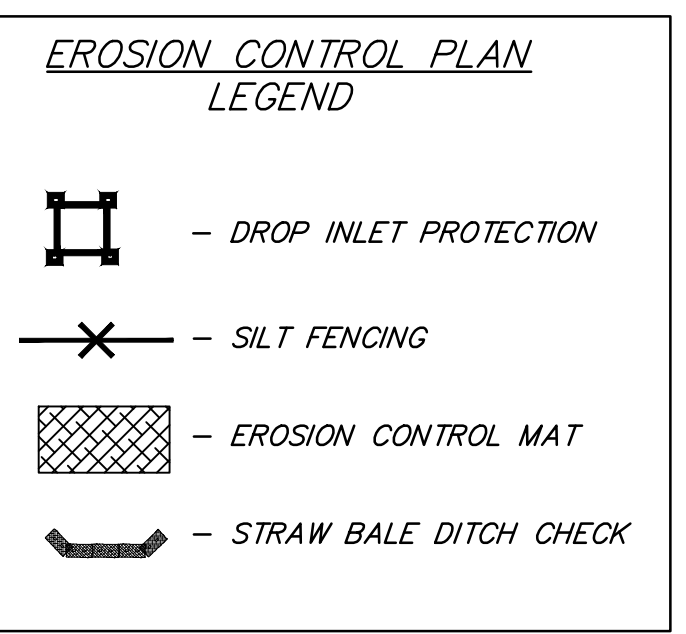
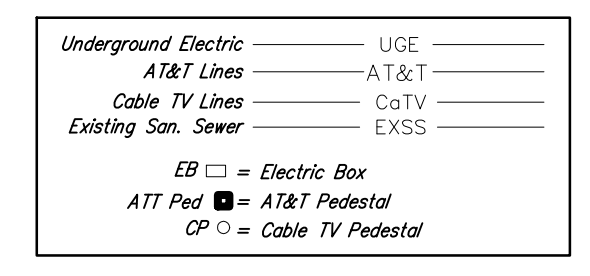
BM #3
"□" Chiseled on Back of Walk.
Northeast corner of parking lot
within Lot 1, Block 1, The
Waterfront 4th Addition
Elevation = 1389.50 (NAVD 88)



Existing Ground — 1364 —

NOTES:
Contractor shall make sure all erosion control is in place before project is accepted. This plan represents the minimum standard. Any additional erosion control measures shall be installed by the Contractor as needed.

All areas disturbed during construction shall be seeded, mulched, and fertilized as per Cover Sheet General Notes.



EROSION CONTROL MEASURE	INSTALL	MAINTAIN	REMOVE
BACK OF CURB PROTECTION (LF)	0	0	0
CONSTRUCTION ENTRANCE (EA)	0	0	0
CURB INLET BARRIER (EA)	0	0	0
DITCH CHECK (EA)	0	0	0
DROP INLET PROTECTION (EA)	6	0	0
EROSION CONTROL (LS)	0	0	0
EROSION CONTROL BERM (LF)	0	0	0
SILT FENCE (LF)	0	0	0
EROSION CONTROL MAT (SY)	0	0	0

Quantities are for information only! contractor shall verify quantities per final bid quantity sheet.

* All existing BMPs including Construction Entrance, Sediment Barriers, Silt Fence, Cut-off Trench, and Erosion Control Mat shall be maintained and repaired if necessary. Replacement or removal of erosion control measures to be paid for by L.S. Bid item "Maintain Existing Erosion Control BMPs"

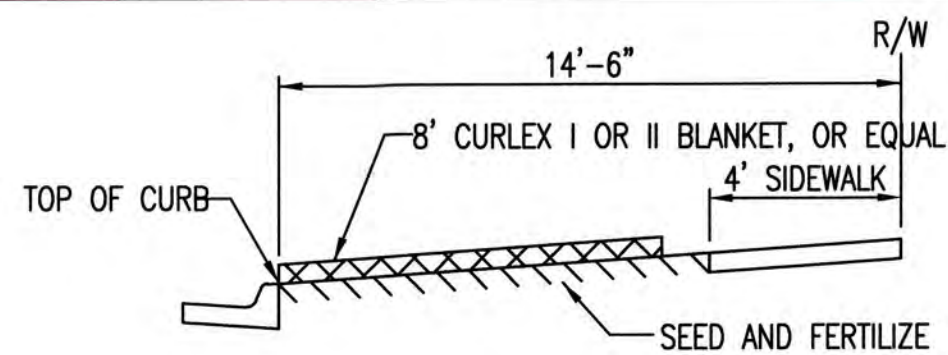
NOTE:
Trees and shrubs in the work area which are in direct conflict with proposed new construction shall be removed by the Contractor ONLY with the Developer or Baughman Company approval. Trees and shrubs which are not in direct conflict with proposed grading construction shall be saved and protected from damage. Trees not in direct conflict shall be chainsaw trimmed as necessary. An on-site pre-construction meeting will occur prior to any construction to discuss tree trimming and removal. All tree removal, clearing, chainsaw trimming, etc. shall be included in the bid item, "Tree Clearing"



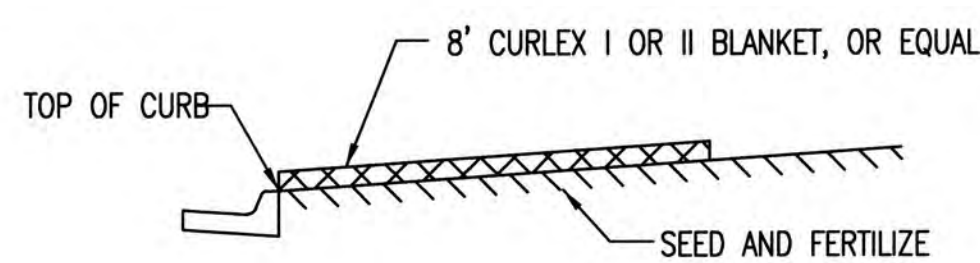
The Waterfront 7th Addition
EROSION CONTROL & EASEMENT GRADING
Private Stormwater Sewer Improvements

Baughman Company, P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

<small>PROJECT NUMBER</small>	<small>DESIGN</small> AEG	<small>DRAWN</small> JAK
<small>REVISIONS:</small>	<small>APPROVED</small> 3/21/16	<small>DATE</small> 3/15/16
<small>SCALE</small> Noted		4 OF 14
<small>SHEET</small>		

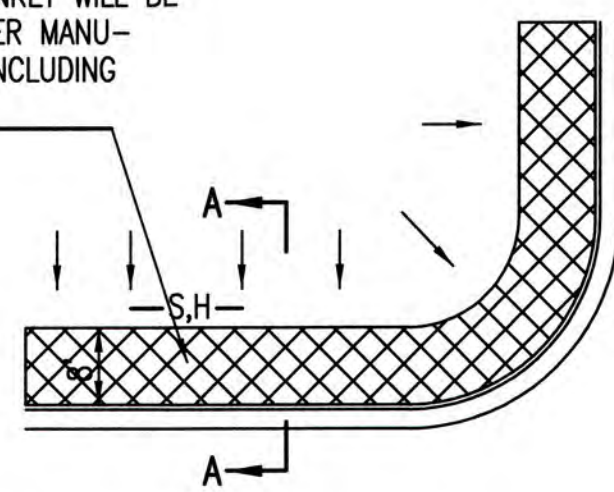


SECTION B-B

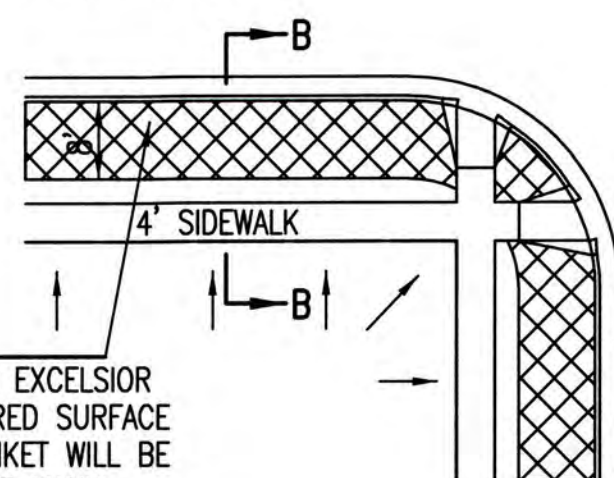


SECTION A-A

INSTALL 8' WIDE CURLEX I OR II EXCELSIOR BLANKET, OR EQUAL, ON PREPARED SURFACE BACK OF CURB. EDGE OF BLANKET WILL BE AT BACK OF CURB. INSTALL PER MANUFACTURER'S RECOMMENDATION, INCLUDING STAPLES. (SEE DETAIL)



SOUTH STREET

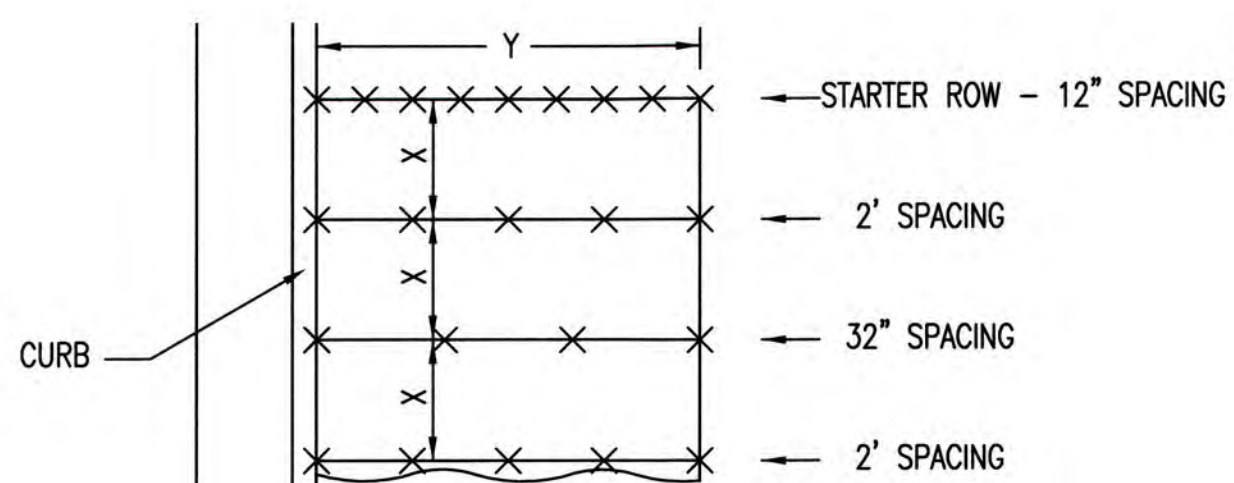


INSTALL 8' WIDE CURLEX I OR II EXCELSIOR BLANKET, OR EQUAL, ON PREPARED SURFACE BACK OF CURB. EDGE OF BLANKET WILL BE AT BACK OF CURB. INSTALL PER MANUFACTURER'S RECOMMENDATION, INCLUDING STAPLES. (SEE DETAIL)

GENERAL NOTES

- EXCELSIOR MAT TO BE INSTALLED WHEN SOD IS NOT SPECIFIED ON PROJECT.
- EXCELSIOR BLANKET TO BE INSTALLED OVER SEED AND FERTILIZER, AS SPECIFIED IN THE PROJECT SPECIFICATIONS.
- AFTER INSTALLATION OF EXCELSIOR BLANKET, AT LOCATIONS WHERE CONCENTRATED FLOW CARRIES SEDIMENT OVER THE CURB AND INTO THE GUTTER, SUPPLEMENTAL EROSION CONTROL DEVICES WILL BE INSTALLED BY THE CONTRACTOR AS NEEDED, TO FIX THE PROBLEM.

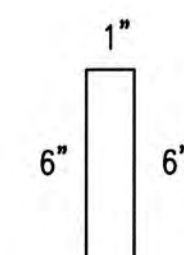
BACK OF CURB PROTECTION DETAIL



STAPLE PATTERN

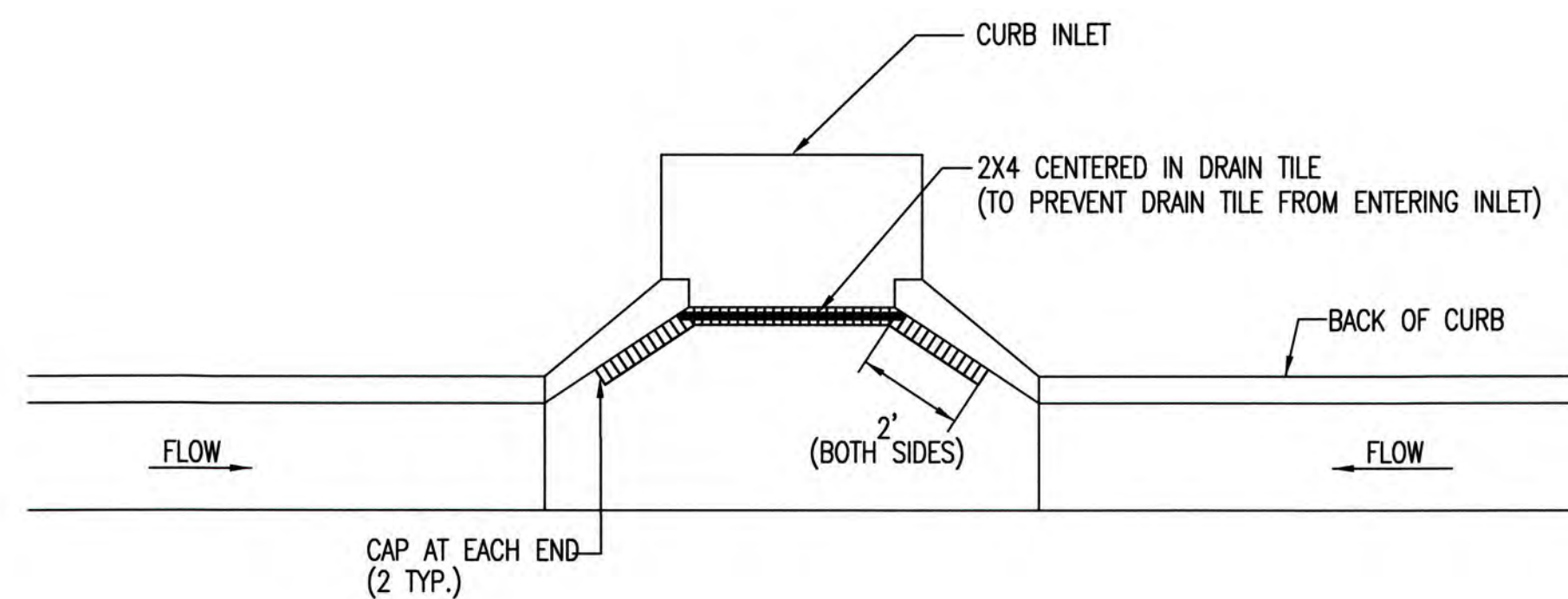
NOTES: USE 6" SEAM OVERLAP
(X & Y = RECOMMENDED BY MANUFACTURE)

DETAILS FOR APPROVED EROSION CONTROL MAT



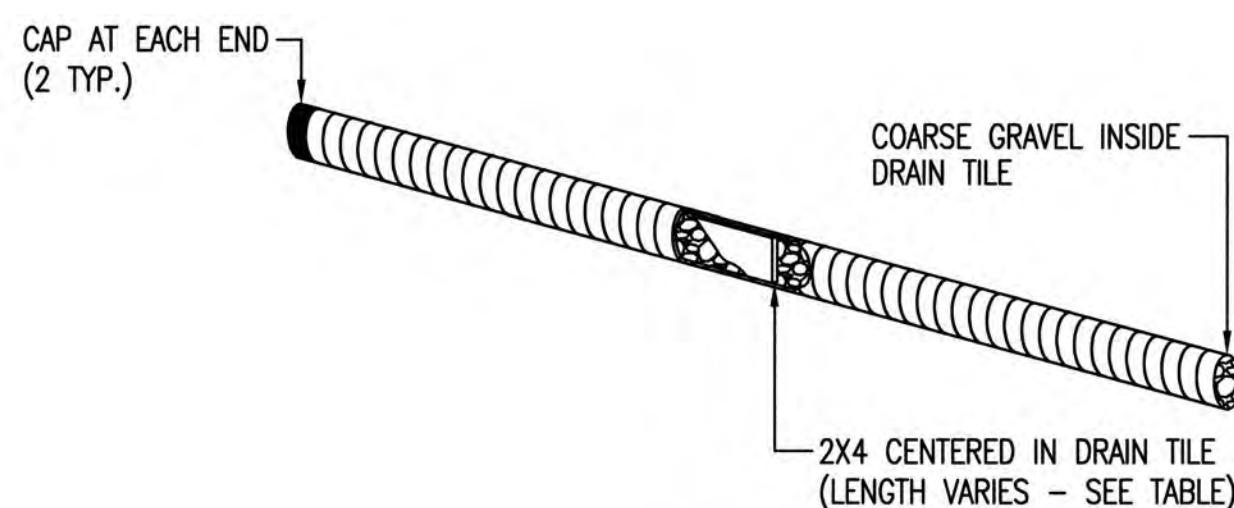
11 GA. WIRE

STAPLE

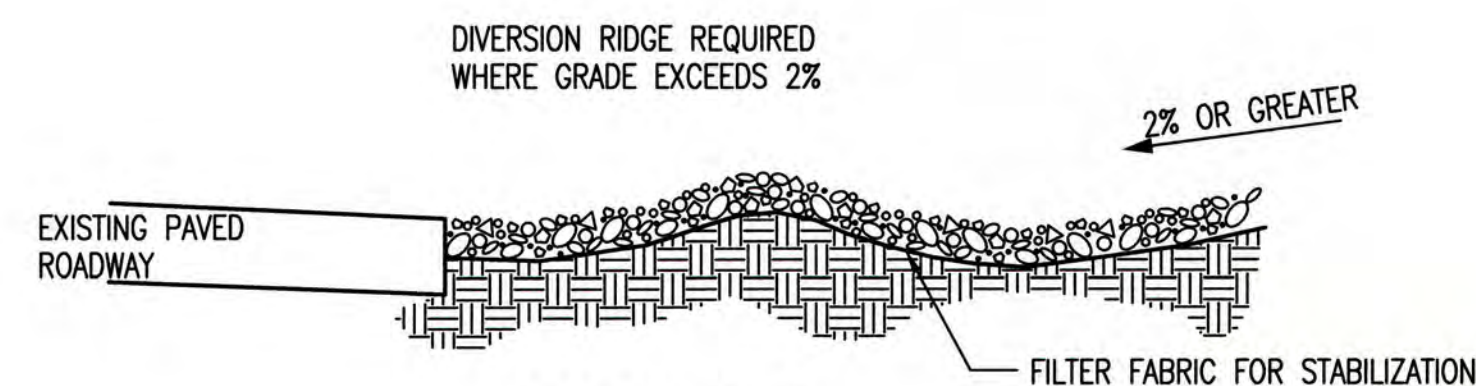


NOTE: PLACE 4" PERFORATED PVC PIPE, FILLED WITH 1/2"-1" DIA. GRAVEL, IN FRONT OF CURB INLET AS SHOWN.

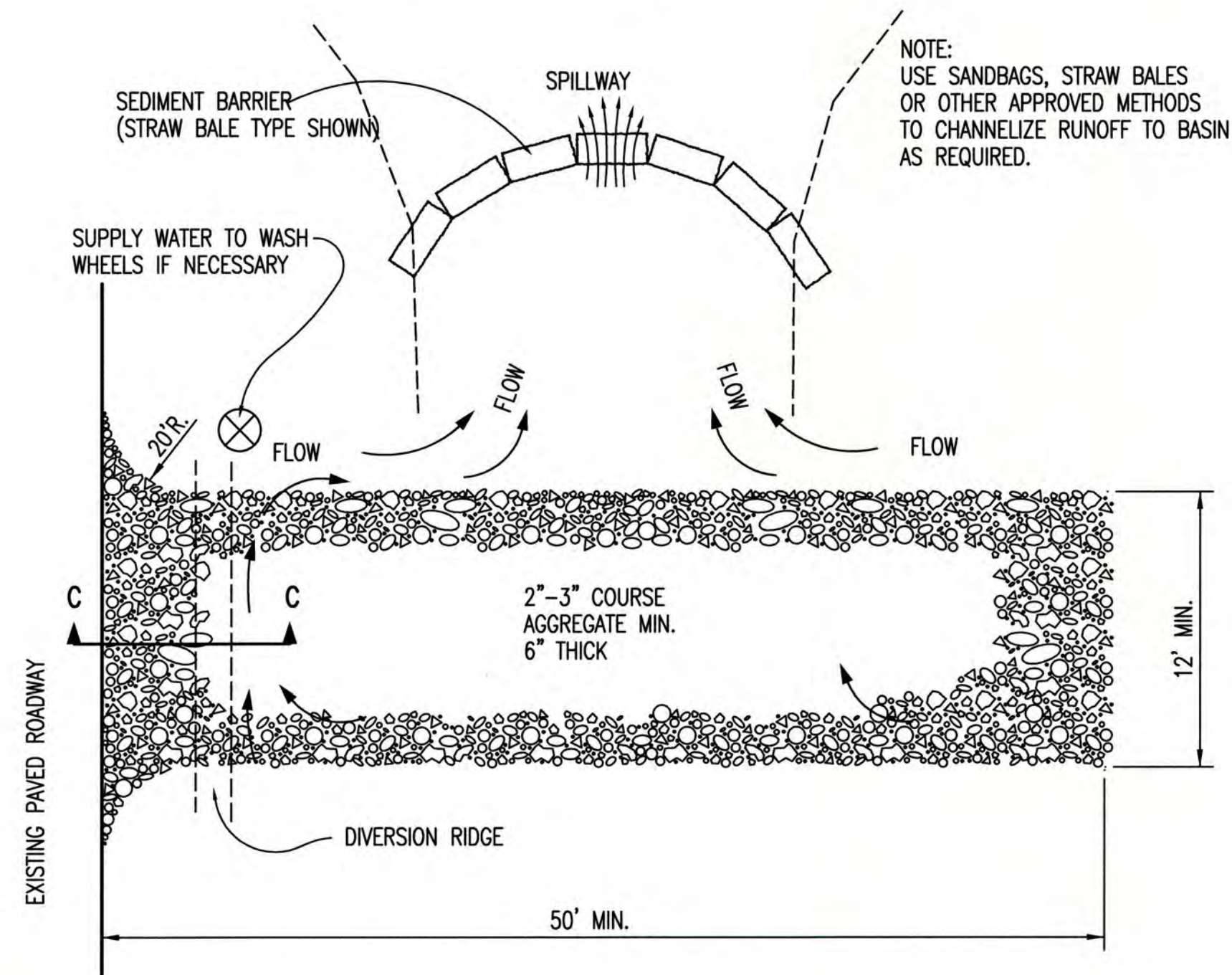
2X4 LENGTH	INLET TYPE	INLET OPENING
5'-6"	1-A	5'-0"
10'-6"	1-A	10'-0"
15'-6"	1-A	15'-0"



CURB INLET PROTECTION
4" PERFORATED PIPE W/ GRAVEL



SECTION C-C



STABILIZED CONSTRUCTION ENTRANCE

GENERAL NOTES

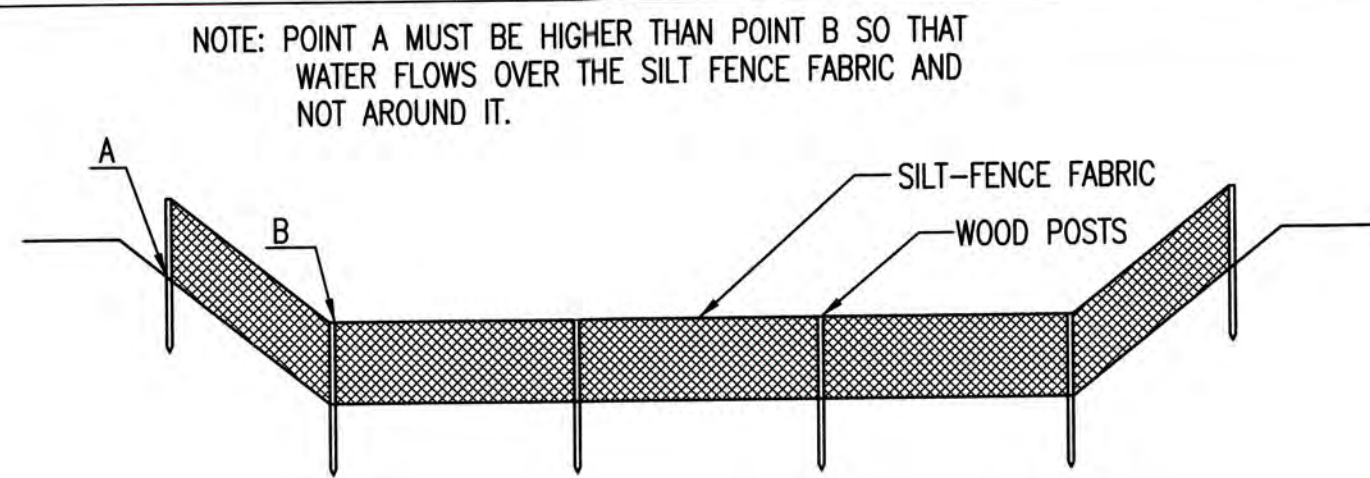
- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
- WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
- WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN, AS SHOWN ABOVE.
- DRIVE ENTRANCES ONTO RESIDENTIAL LOTS WILL NOT BE REQUIRED TO HAVE THE SEDIMENT BARRIER SHOWN, BUT WHEEL WASHING MAY BE REQUIRED IF STABILIZED ENTRANCE IS NOT SUFFICIENT TO KEEP MUD FROM BEING TRACKED ONTO ADJACENT STREET. ENTRANCE SHALL EXTEND FROM BACK OF CURB TO DWELLING.

REVISION DATE: MAY 2013



BACK OF CURB PROTECTION, CURB INLET PROTECTION AND CONSTRUCTION ENTRANCE

CITY ENGINEER GARY JANZEN, P.E.		
PROJECT NUMBER	OCA NUMBER	DATE 5/2013
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		SHEET 5 of 14



ELEVATION
SILT FENCE DITCH CHECKS
(STREAM PROTECTION)

MATERIAL SPECIFICATION:

SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION. THE POSTS USED TO SUPPORT THE SILT FENCE FABRIC SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG. SILT FENCE FABRIC SHOULD BE ATTACHED TO THE WOODEN POSTS WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

PLACEMENT:

PLACE SILT FENCE IN DITCHES WHERE IT IS UNLIKELY THAT IT WILL BE OVERTOPPED. WATER SHOULD FLOW THROUGH A SILT FENCE DITCH CHECK, NOT OVER IT. SILT FENCE DITCH CHECKS OFTEN FAIL WHEN OVERTOPPED. SILT FENCE DITCH CHECKS SHOULD BE PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH. THE SILT FENCE SHOULD EXTEND FAR ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE FENCE IS HIGHER THAN THE TOP OF THE LOW POINT OF THE FENCE. THIS PREVENTS WATER FROM FLOWING AROUND THE CHECK. SILT FENCE DITCH CHECKS SHOULD NOT BE PLACED IN DITCHES WHERE HIGH FLOWS ARE EXPECTED. ROCK CHECKS SHOULD BE USED INSTEAD. SILT FENCE SHOULD BE PLACED IN DITCHES WITH SLOPES OF 6% OR LESS. FOR SLOPES STEEPER THAN 6%, ROCK CHECKS SHOULD BE USED.

THE FOLLOWING TABLE PROVIDES CHECK SPACING FOR A GIVEN DITCH GRADE:

DITCH CHECK DITCH GRADE (%)	SPACING CHECK SPACING (FEET)
0.5	200
1.0	200
2.0	100
3.0	65
4.0	50
5.0	40
6.0	30

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH PERPENDICULAR TO THE DITCH FLOWLINE THAT IS AT LEAST 12" DEEP BY 6" WIDE. EXTEND THE TRENCH IN A STRAIGHT LINE ALONG THE ENTIRE LENGTH OF THE PROPOSED DITCH CHECK. PLACE THE SOIL ON THE UPSTREAM SIDE OF THE TRENCH FOR LATER USE. ROLL OUT A CONTINUOUS LENGTH OF SILT FENCE FABRIC ON THE DOWNSLOPE SIDE OF THE TRENCH. PLACE THE EDGE OF THE FABRIC IN THE TRENCH STARTING AT THE TOP UPSTREAM EDGE OF THE TRENCH. LINE TWO SIDES OF THE TRENCH WITH THE FABRIC AS SHOWN ON DETAIL. BACKFILL OVER THE FABRIC IN THE TRENCH WITH THE EXCAVATED SOIL AND COMPACT. AFTER FILLING THE TRENCH, APPROXIMATELY 24" TO 36" OF SILT FENCE FABRIC SHOULD REMAIN EXPOSED. LAY THE EXPOSED SILT FENCE ON THE UPSTREAM SIDE OF THE TRENCH TO CLEAR AN AREA FOR DRIVING IN THE POSTS. JUST DOWNSLOPE OF THE TRENCH, DRIVE POSTS INTO THE GROUND TO A DEPTH OF AT LEAST 24". PLACE POSTS NO MORE THAN 4' APART. ATTACH THE SILT FENCE TO THE ANCHORED POST WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

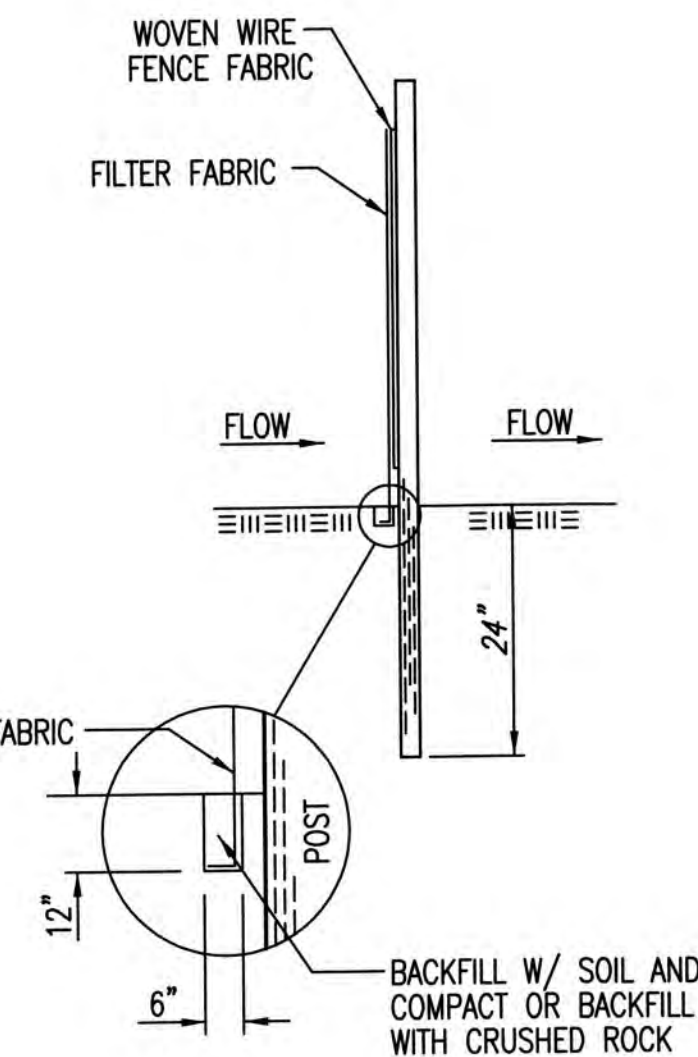
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WATER SHOULD FLOW THROUGH A SILT FENCE DITCH CHECK—NOT OVER IT. PLACE SILT FENCE IN DITCHES WHERE IT IS UNLIKELY THAT IT WILL BE OVERTOPPED. SILT FENCE INSTALLATIONS QUICKLY DETERIORATE WHEN WATER OVERTOPS THEM. DO NOT PLACE SILT FENCE POSTS ON THE UPSTREAM SIDE OF THE SILT FENCE FABRIC. IN THIS CONFIGURATION, THE FORCE OF THE WATER IS NOT RESTRICTED BY THE POSTS, BUT ONLY BY THE STAPLES (WIRE, ZIP TIES, NAILS, ETC.). THE SILT FENCE WILL RIP AND FAIL. DO NOT PLACE A SILT FENCE DITCH CHECK DIRECTLY IN FRONT OF A CULVERT OUTLET. IT WILL NOT STAND UP TO THE CONCENTRATED FLOW. DO NOT PLACE SILT FENCE DITCH CHECKS IN DITCHES THAT WILL LIKELY EXPERIENCE HIGH FLOWS. THEY WILL NOT STAND UP TO CONCENTRATED FLOW. FOLLOW PRESCRIBED DITCH CHECK SPACING GUIDELINES. IF SPACING GUIDELINES ARE EXCEEDED, EROSION WILL OCCUR BETWEEN THE DITCH CHECKS. DO NOT ALLOW WATER TO FLOW AROUND THE DITCH CHECK. MAKE SURE THAT THE DITCH CHECK IS LONG ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE FENCE IS HIGHER THAN THE LOW POINT ON THE TOP OF THE FENCE. DO NOT PLACE SILT FENCE DITCH CHECKS IN CHANNELS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE CHECK IS NOT ANCHORED SUFFICIENTLY, IT WILL WASH OUT.

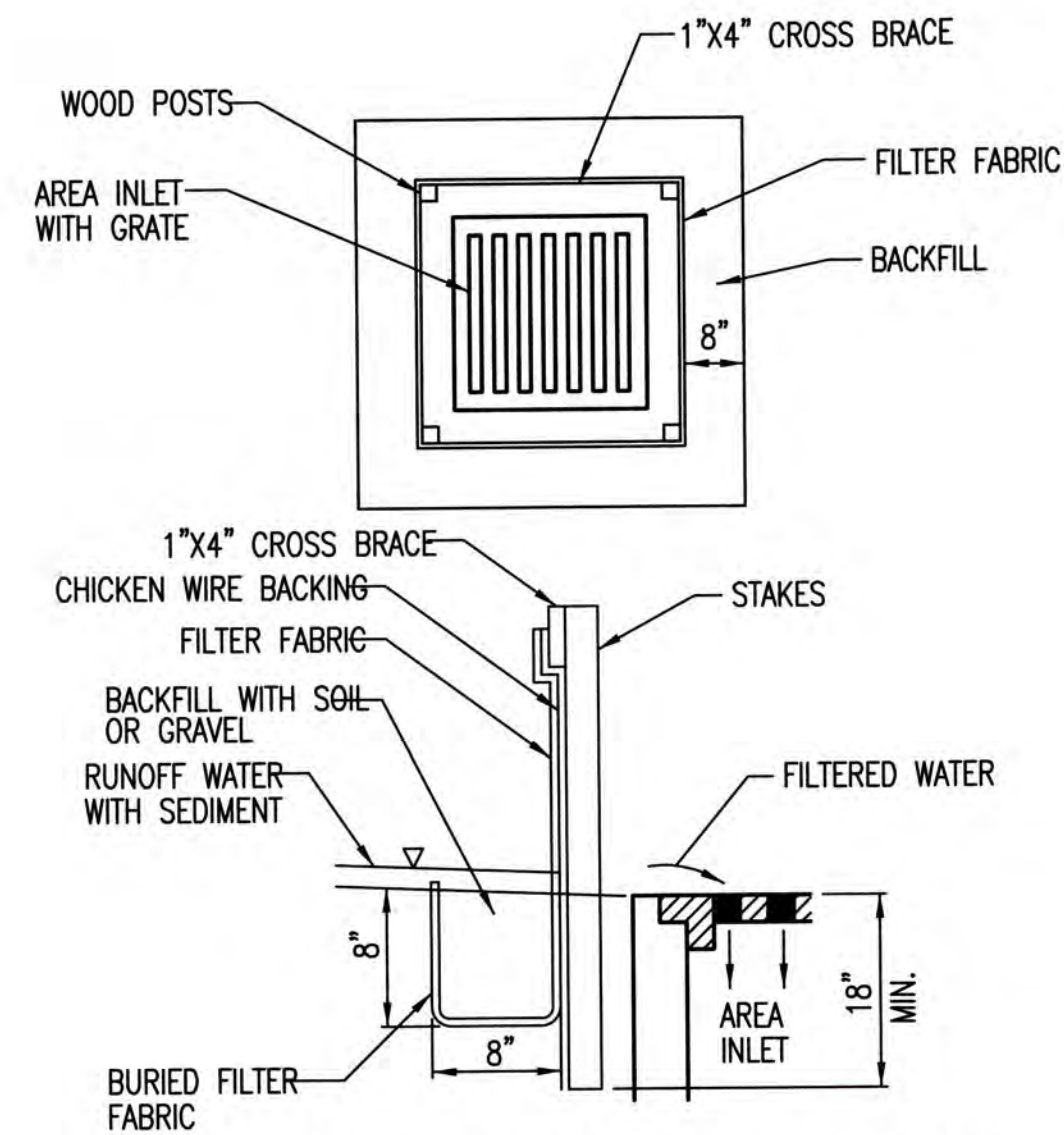
INSPECTION AND MAINTENANCE:

SILT FENCE DITCH CHECKS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

- DOES WATER FLOW AROUND THE DITCH CHECK?
- DOES WATER FLOW UNDER THE DITCH CHECK?
- DOES THE SILT FENCE SAG EXCESSIVELY?
- HAS THE SILT FENCE TORN OR BECOME DETACHED FROM THE POSTS?
- DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE DITCH CHECK?



ANCHOR TRENCH DETAIL



SILT FENCE BARRIERS FOR AREA INLETS
(INLET PROTECTION)

MATERIAL SPECIFICATION:

SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION. THE WIRE OR POLYMERIC MESH BACKING USED TO HELP SUPPORT THE SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION. THE POSTS USED TO SUPPORT THE SILT FENCE FABRIC SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG. THE MATERIAL USED TO FRAME THE TOPS OF THE POSTS SHOULD BE 1" BY 4" BOARDS. SILT FENCE FABRIC AND SUPPORT BACKING SHOULD BE ATTACHED TO THE WOODEN POSTS AND FRAME WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

PLACEMENT:

PLACE A SILT FENCE DROP INLET BARRIER IN A LOCATION WHERE IT IS UNLIKELY TO BE OVERTOPPED. WATER SHOULD FLOW THROUGH SILT FENCE, NOT OVER IT. SILT FENCE BARRIERS FOR AREA INLETS OFTEN FAIL WHEN REPEATEDLY OVERTOPPED. WHEN USED AS A BARRIER FOR AREA INLETS, SILT FENCE FABRIC AND POSTS MUST BE SUPPORTED AT THE TOP BY A WOODEN FRAME. WHEN A SILT FENCE BARRIER FOR AREA INLETS IS LOCATED NEAR AN INLET THAT HAS STEEP APPROACH SLOPES, THE STORAGE CAPACITY BEHIND THE BARRIER IS DRASTICALLY REDUCED. TIMELY REMOVAL OF SEDIMENT MUST OCCUR FOR A BARRIER TO OPERATE PROPERLY IN THIS LOCATION.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH AROUND THE PERIMETER OF THE AREA INLET THAT IS AT LEAST 8" DEEP BY 8" WIDE. DRIVE POSTS TO A DEPTH OF AT LEAST 18" AROUND THE PERIMETER OF THE AREA INLET. THE DISTANCE BETWEEN POSTS SHOULD BE 4' OR LESS. IF THE DISTANCE BETWEEN TWO ADJACENT CORNER POSTS IS MORE THAN 4', ADD ANOTHER POST(S) BETWEEN THEM. CONNECT THE TOPS OF ALL THE POSTS WITH A WOODEN FRAME MADE OF 1" BY 4" BOARDS. USE NAILS OR SCREWS FOR FASTENING. ATTACH THE WIRE OR POLYMERIC-MESH BACKING TO THE OUTSIDE OF THE POST/FRAME STRUCTURE WITH STAPLES, WIRE, ZIP TIES, OR NAILS. ROLL OUT A CONTINUOUS LENGTH OF SILT FENCE FABRIC LONG ENOUGH TO WRAP AROUND THE PERIMETER OF THE AREA INLET. ADD MORE LENGTH FOR OVERLAPPING THE FABRIC JOINT. PLACE THE EDGE OF THE FABRIC IN THE TRENCH, STARTING AT THE OUTSIDE EDGE OF THE TRENCH. LINE ALL THREE SIDES OF THE TRENCH WITH THE FABRIC. BACKFILL OVER THE FABRIC IN THE TRENCH WITH THE EXCAVATED SOIL AND COMPACT. AFTER FILLING THE TRENCH, APPROXIMATELY 24" TO 36" OF SILT FENCE FABRIC SHOULD REMAIN EXPOSED. ATTACH THE SILT FENCE TO THE OUTSIDE OF THE POST/FRAME STRUCTURE WITH STAPLES, WIRE, ZIP TIES, OR NAILS. THE JOINT SHOULD BE OVERLAPPED TO THE NEXT POST.

NOTE: WHEN A SILT FENCE BARRIER FOR AREA INLET IS PLACED IN A SHALLOW MEDIAN DITCH, MAKE SURE THAT THE TOP OF THE BARRIER IS NOT HIGHER THAN THE PAVED ROAD. IN THIS CONFIGURATION, WATER MAY SPREAD ONTO THE ROADWAY CAUSING A HAZARDOUS CONDITION.

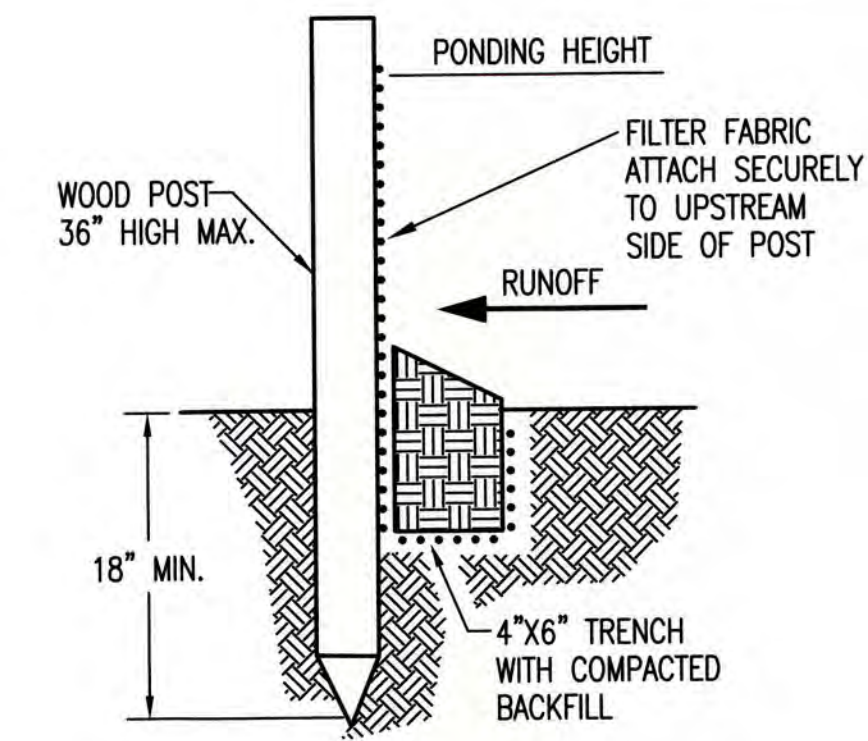
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WATER SHOULD FLOW THROUGH A SILT FENCE BARRIER FOR AREA INLET—NOT OVER IT. PLACE A SILT FENCE BARRIER FOR AREA INLET IN A LOCATION WHERE IT IS UNLIKELY TO BE OVERTOPPED. SILT FENCE BARRIER FOR AREA INLETS OFTEN FAIL WHEN REPEATEDLY OVERTOPPED. DO NOT PLACE POSTS ON THE OUTSIDE OF THE SILT FENCE BARRIER FOR AREA INLET. IN THIS CONFIGURATION, THE FORCE OF THE WATER IS NOT RESTRICTED BY THE POSTS, BUT ONLY BY THE STAPLES (WIRE, ZIP TIES, NAILS, ETC.). THE SILT FENCE WILL RIP AND FAIL. DO NOT INSTALL SILT FENCE BARRIER FOR AREA INLETS WITHOUT FRAMING THE TOP OF THE POSTS. THE CORNER POSTS AROUND AREA INLETS ARE STRESSED IN TWO DIRECTIONS WHEREAS A NORMAL SILT FENCE IS ONLY STRESSED IN ONE DIRECTION. THIS ADDED STRESS REQUIRES MORE SUPPORT.

INSPECTION AND MAINTENANCE:

SILT FENCE BARRIER FOR AREA INLETS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

- DOES WATER FLOW UNDER THE SILT FENCE?
- DOES THE SILT FENCE SAG EXCESSIVELY?
- HAS THE SILT FENCE TORN OR BECOME DETACHED FROM THE POSTS?
- DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE AREA INLET BARRIER?



SILT FENCE BARRIERS

MATERIAL SPECIFICATION:

SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION. THE POSTS USED TO SUPPORT THE SILT FENCE FABRIC SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG. SILT FENCE FABRIC SHOULD BE ATTACHED TO THE WOODEN POSTS WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

PLACEMENT:

A SLOPE BARRIER SHOULD BE USED AT THE TOE OF A SLOPE WHEN A DITCH DOES NOT EXIST. THE SLOPE BARRIER SHOULD BE PLACED ON NEARLY LEVEL GROUND 5' TO 10' AWAY FROM THE TOE OF A SLOPE. THE BARRIER IS PLACED AWAY FROM THE TOE OF THE SLOPE TO PROVIDE ADEQUATE STORAGE FOR SETTLING OUT SEDIMENT. WHEN PRACTICABLE, SILT FENCE SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. SILT FENCE SLOPE BARRIERS CAN ALSO BE PLACED ALONG RIGHT-OF-WAY FENCE LINES TO KEEP SEDIMENT FROM CROSSING ONTO ADJACENT PROPERTY. WHEN PLACED IN THIS MANNER, THE SLOPE BARRIER WILL NOT LIKELY FOLLOW CONTOURS.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH THE LENGTH OF THE PLANNED SLOPE BARRIER THAT IS 6" DEEP BY 4" WIDE. MAKE SURE THAT THE TRENCH IS EXCAVATED ALONG A SINGLE CONTOUR. WHEN PRACTICABLE, SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. PLACE THE SOIL ON THE UPSLOPE SIDE OF THE TRENCH FOR LATER USE. ROLL OUT A CONTINUOUS LENGTH OF SILT FENCE FABRIC ON THE DOWNSLOPE SIDE OF THE TRENCH. PLACE THE EDGE OF THE FABRIC IN THE TRENCH STARTING AT THE TOP UPSLOPE EDGE. LINE ALL THREE SIDES OF THE TRENCH WITH THE FABRIC. BACKFILL OVER THE FABRIC IN THE TRENCH WITH THE EXCAVATED SOIL AND COMPACT. AFTER FILLING THE TRENCH, APPROXIMATELY 24" TO 36" OF SILT-FENCE FABRIC SHOULD REMAIN EXPOSED. LAY THE EXPOSED SILT FENCE UPSLOPE OF THE TRENCH TO CLEAR AN AREA FOR DRIVING IN THE POSTS. JUST DOWNSLOPE OF THE TRENCH, DRIVE POSTS INTO THE GROUND TO A DEPTH OF AT LEAST 18". PLACE POSTS NO MORE THAN 4' APART. ATTACH THE SILT FENCE TO THE ANCHORED POST WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WHEN PRACTICABLE, DO NOT PLACE SILT FENCE SLOPE BARRIERS ACROSS CONTOURS. SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. WHEN THE FLOW CONCENTRATES, IT OVERTOPS THE BARRIER AND THE SILT FENCE SLOPE BARRIER QUICKLY DETERIORATES. DO NOT PLACE SILT-FENCE POSTS ON THE UPSLOPE SIDE OF THE SILT FENCE FABRIC. IN THIS CONFIGURATION, THE FORCE OF THE WATER IS NOT RESTRICTED BY THE POSTS, BUT ONLY BY THE STAPLES (WIRE, ZIP TIES, NAILS, ETC.). THE SILT FENCE WILL RIP AND FAIL. DO NOT PLACE SILT FENCE SLOPE BARRIERS IN AREAS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE BARRIER IS NOT SUFFICIENTLY ANCHORED, IT WILL WASH OUT. SILT FENCE SLOPE BARRIERS MUST BE DUG INTO THE GROUND—SILT FENCE AT GROUND LEVEL DOES NOT WORK BECAUSE WATER WILL FLOW UNDERNEATH.

INSPECTION AND MAINTENANCE:

SILT FENCE SLOPE BARRIERS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

- ARE THERE ANY POINTS ALONG THE SLOPE BARRIER WHERE WATER IS CONCENTRATING?
- DOES WATER FLOW UNDER THE SLOPE BARRIER?
- DO THE SILT FENCES SAG EXCESSIVELY?
- HAS THE SILT FENCE TORN OR BECOME DETACHED FROM THE POSTS?
- DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE SLOPE BARRIER?

REVISION DATE: MAY 2013



SILT FENCE DITCH CHECK AND BARRIER DETAILS

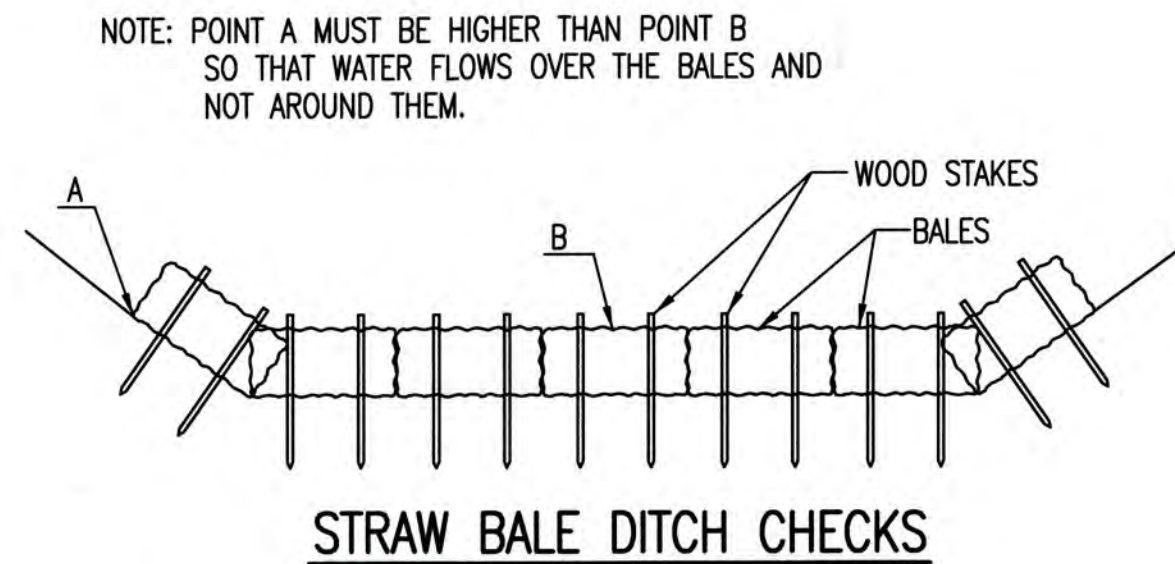
CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE
		5/2013

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

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MATERIAL SPECIFICATION:

BALE DITCH CHECKS MAY BE CONSTRUCTED OF WHEAT STRAW, OAT STRAW, PRAIRIE HAY, OR BROMEGRASS HAY THAT IS FREE OF WEEDS DECLARED NOXIOUS BY THE KANSAS STATE BOARD OF AGRICULTURE. THE STAKES USED TO ANCHOR THE BALES SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG. OPTIONAL: THE DOWNSTREAM SCOUR APRON SHOULD BE CONSTRUCTED OF A DOUBLE-NETTED STRAW EROSION-CONTROL BLANKET AT LEAST 6' WIDE. OPTIONAL: THE METAL LANDSCAPE STAPLES USED TO ANCHOR THE EROSION-CONTROL BLANKET SHOULD BE AT LEAST 8" LONG.

PLACEMENT:

BALE DITCH CHECKS SHOULD BE PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH. THE DITCH CHECK SHOULD EXTEND FAR ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE CHECK IS HIGHER THAN THE TOP OF THE LOWEST CENTER BALE. THIS PREVENTS WATER FROM FLOWING AROUND THE CHECK. STRAW BALE DITCH CHECKS SHOULD NOT BE PLACED IN DITCHES WHERE HIGH FLOWS ARE EXPECTED. ROCK CHECKS SHOULD BE USED INSTEAD. BALES SHOULD BE PLACED IN DITCHES WITH SLOPES OF 6% OR LESS. FOR SLOPES STEEPER THAN 6%, ROCK CHECKS SHOULD BE USED. THE FOLLOWING TABLE PROVIDES CHECK SPACING FOR A GIVEN DITCH GRADE:

DITCH CHECK SPACING DITCH GRADE (%)	CHECK SPACING (FEET)
0.5	200
1.0	200
2.0	100
3.0	65
4.0	50
5.0	40
6.0	30

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH PERPENDICULAR TO THE DITCH FLOWLINE THAT IS 4" DEEP AND A BALE'S WIDTH WIDE. EXTEND THE TRENCH IN A STRAIGHT LINE ALONG THE ENTIRE LENGTH OF THE PROPOSED DITCH CHECK. PLACE THE SOIL ON THE UPSTREAM SIDE OF THE TRENCH-IT WILL BE USED LATER. OPTIONAL: ON THE DOWNSTREAM SIDE OF THE TRENCH, ROLL OUT A LENGTH OF EROSION-CONTROL BLANKET (SCOUR APRON) EQUAL TO THE LENGTH OF THE TRENCH. PLACE THE UPSTREAM EDGE OF THE EROSION-CONTROL BLANKET ALONG THE BOTTOM UPSTREAM EDGE OF THE TRENCH. THE EROSION CONTROL BLANKET SHOULD BE ANCHORED IN THE TRENCH WITH ONE ROW OF 8" LANDSCAPE STAPLES PLACED ON 18" CENTERS. THE REMAINDER OF THE EROSION-CONTROL BLANKET (THE PORTION THAT IS NOT LYING IN THE TRENCH) WILL SERVE AS THE DOWNSTREAM SCOUR APRON. THIS SECTION OF THE BLANKET SHOULD BE ANCHORED TO THE GROUND WITH 8" LANDSCAPE STAPLES PLACED AROUND THE PERIMETER OF THE BLANKET ON 18" CENTERS. THE REMAINDER OF THE BLANKET SHOULD BE ANCHORED USING TWO EVENLY SPACED ROWS OF 8" LANDSCAPE STAPLES ON 18" CENTERS PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH. PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE ALONG THE CENTERLINE OF THE DITCH CHECK, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS. STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND. ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE UPSTREAM SIDE OF THE CHECK AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP AND EXTEND UPSTREAM NO MORE THAN 24".

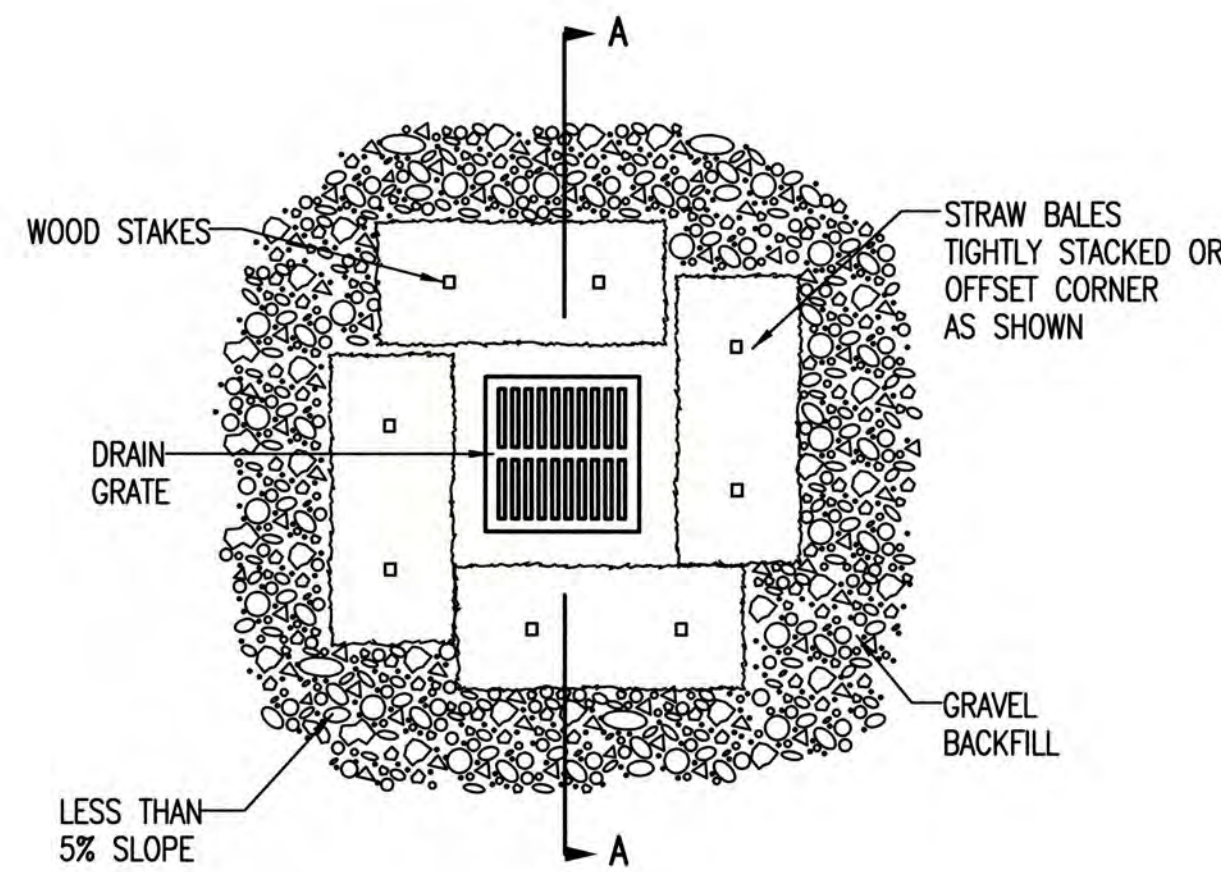
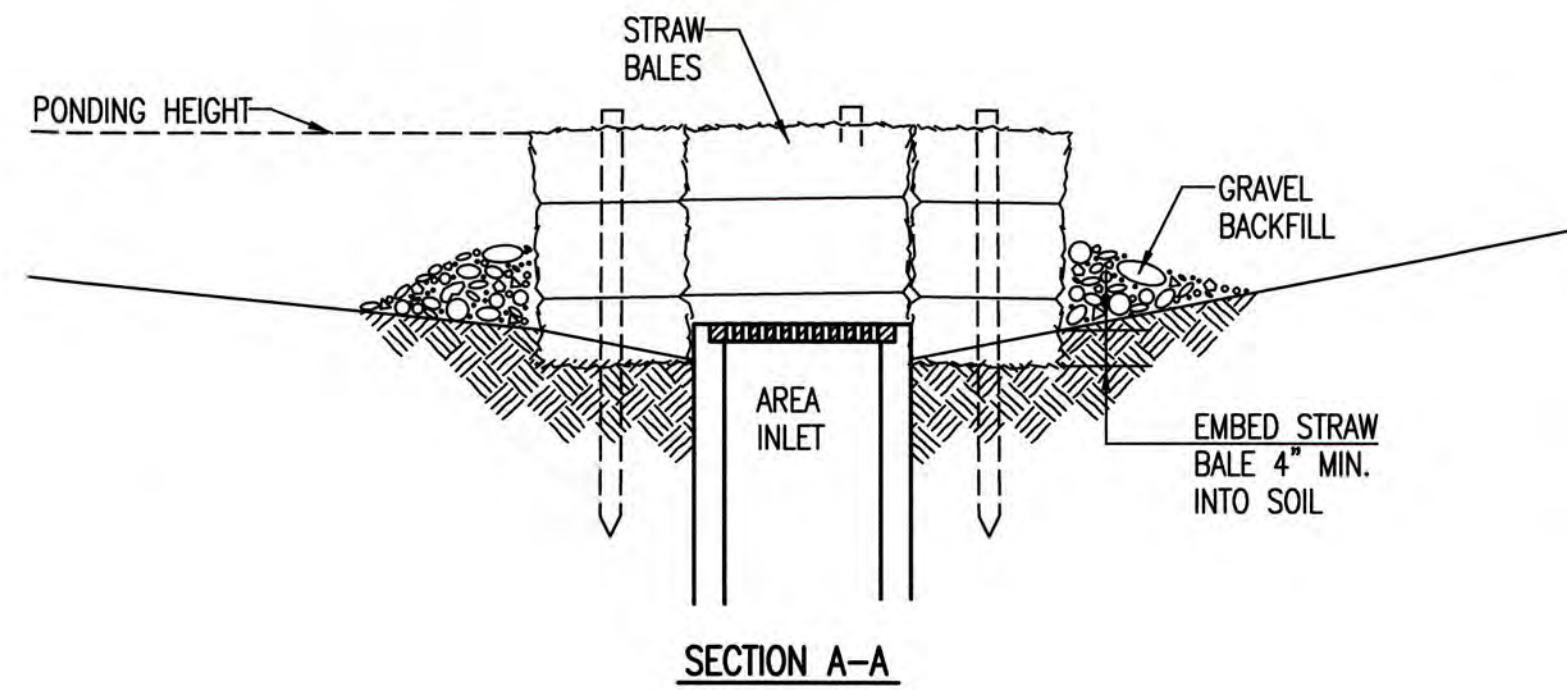
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

DO NOT PLACE A BALE DITCH CHECK DIRECTLY IN FRONT OF A CULVERT OUTLET. IT WILL NOT STAND UP TO THE CONCENTRATED FLOW. DO NOT PLACE BALE DITCH CHECKS IN DITCHES THAT WILL LIKELY EXPERIENCE HIGH FLOWS. THEY WILL NOT STAND UP TO CONCENTRATED FLOW. FOLLOW PRESCRIBED DITCH-CHECK SPACING GUIDELINES. IF SPACING GUIDELINES ARE EXCEEDED, EROSION WILL OCCUR BETWEEN THE DITCH CHECKS. DO NOT ALLOW WATER TO FLOW AROUND THE DITCH CHECK. MAKE SURE THAT THE DITCH CHECK IS LONG ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE CHECK IS HIGHER THAN THE TOP OF THE LOWEST CENTER BALE. DO NOT PLACE BALE DITCH CHECKS IN CHANNELS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE CHECK IS NOT ANCHORED SUFFICIENTLY, IT WILL WASH OUT. BALE DITCH CHECKS MUST BE DUG INTO THE GROUND. BALES AT GROUND LEVEL DO NOT WORK BECAUSE THEY ALLOW WATER TO FLOW UNDER THE CHECK.

INSPECTION AND MAINTENANCE:

BALE DITCH CHECKS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

- DOES WATER FLOW AROUND THE DITCH CHECK?
- DOES WATER FLOW UNDER THE DITCH CHECK?
- DOES WATER FLOW THROUGH SPACES BETWEEN ABUTTING BALES?
- ARE ANY BALES AND/OR SCOUR APRONS (OPTIONAL) DISLODGED?
- ARE BALES DECOMPOSING DUE TO AGE AND/OR WATER DAMAGE?
- DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE DITCH CHECK?



STRAW BALE BARRIERS FOR AREA INLETS (INLET PROTECTION)

MATERIAL SPECIFICATION:

BALE AREA INLET BARRIERS SHOULD BE CONSTRUCTED OF WHEAT STRAW, OAT STRAW, PRAIRIE HAY, OR BROMEGRASS HAY THAT IS FREE OF WEEDS DECLARED NOXIOUS BY THE KANSAS STATE BOARD OF AGRICULTURE. THE STAKES USED TO ANCHOR THE BALES SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG. TWINE SHOULD BE USED TO BIND BALES. THE USE OF WIRE BINDING IS PROHIBITED BECAUSE IT DOES NOT BIODEGRADE READILY.

PLACEMENT:

BALE AREA INLET BARRIERS SHOULD BE PLACED DIRECTLY AROUND THE PERIMETER OF A DROP INLET. WHEN A BALE AREA INLET BARRIER IS LOCATED NEAR AN INLET THAT HAS STEEP APPROACH SLOPES, THE STORAGE CAPACITY BEHIND THE BARRIER IS DRASTICALLY REDUCED. TIMELY REMOVAL OF SEDIMENT MUST OCCUR FOR A BARRIER TO OPERATE PROPERLY IN THIS LOCATION.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH AROUND THE PERIMETER OF THE AREA INLET THAT IS AT LEAST 4" DEEP BY A BALE'S WIDTH WIDE. PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. SOME BALES MAY NEED TO BE SHORTENED TO FIT INTO THE TRENCH AROUND THE AREA INLET. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS. STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND. ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE RECEIVING SIDE OF THE BARRIER AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP. NOTE: WHEN A BALE AREA INLET BARRIER IS PLACED IN A SHALLOW MEDIAN DITCH, MAKE SURE THAT THE TOP OF THE BARRIER IS NOT HIGHER THAN THE PAVED ROAD. IN THIS CONFIGURATION, WATER MAY SPREAD ONTO THE ROADWAY CAUSING A HAZARDOUS CONDITION.

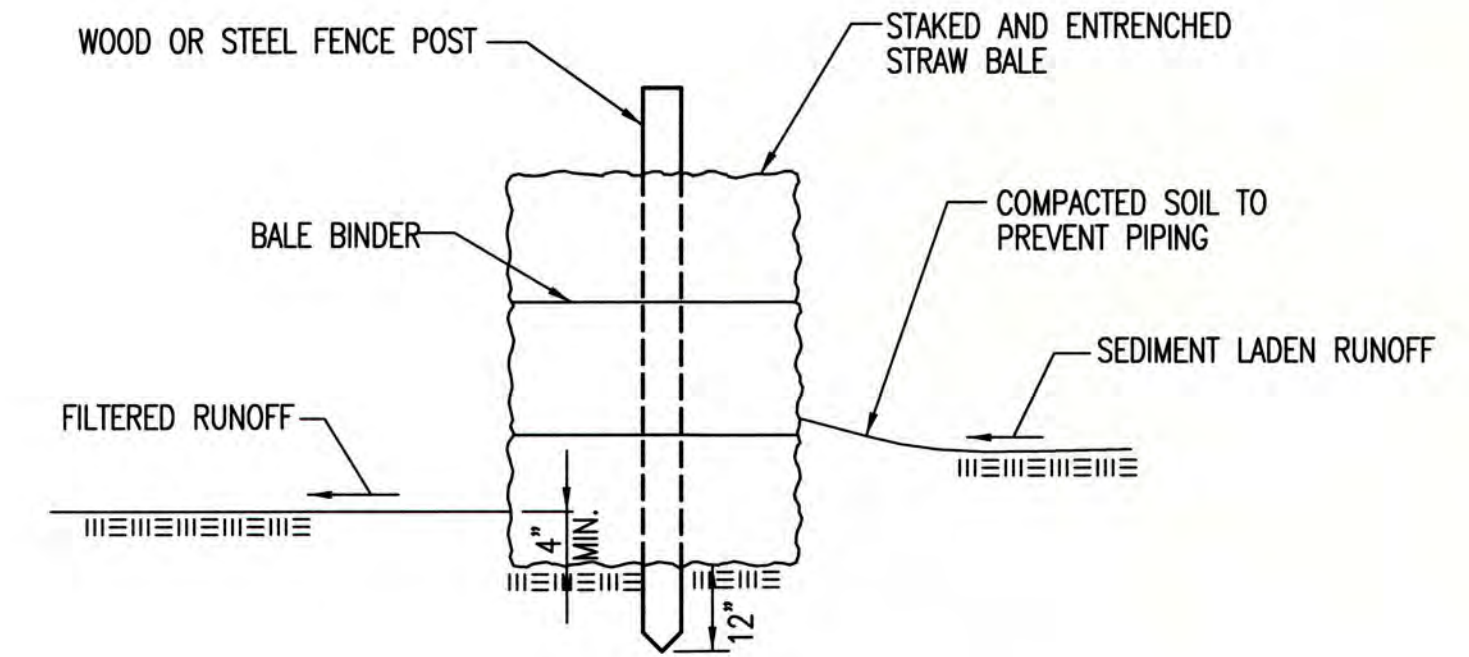
LIST OF COMMON PLACEMENT INSTALLATION MISTAKES TO AVOID:

BALES SHOULD BE PLACED DIRECTLY AGAINST THE PERIMETER OF THE AREA INLET. THIS ALLOWS OVERTOPPING WATER TO FLOW DIRECTLY INTO THE INLET INSTEAD OF ONTO NEARBY SOIL CAUSING SCOUR. BALE AREA INLET BARRIERS MUST BE DUG INTO THE GROUND. BALES AT GROUND LEVEL DO NOT WORK BECAUSE THEY ALLOW WATER TO FLOW UNDER THE BARRIER.

INSPECTION AND MAINTENANCE:

BALE AREA INLET BARRIERS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

- DOES WATER FLOW UNDER THE AREA INLET BARRIER?
- DOES WATER FLOW THROUGH SPACES BETWEEN ABUTTING BALES?
- ARE ANY BALES DISLODGED?
- ARE BALES DECOMPOSING DUE TO AGE AND/OR WATER DAMAGE?
- DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE AREA INLET BARRIER?



STRAW BALE BARRIERS

MATERIAL SPECIFICATION:

BALE SLOPE BARRIERS MAY BE CONSTRUCTED OF WHEAT STRAW, OAT STRAW, PRAIRIE HAY, OR BROMEGRASS HAY THAT IS FREE OF WEEDS DECLARED NOXIOUS BY THE KANSAS STATE BOARD OF AGRICULTURE. THE STAKES USED TO ANCHOR THE BALES SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG. TWINE SHOULD BE USED TO BIND BALES. THE USE OF WIRE BINDING IS PROHIBITED BECAUSE IT DOES NOT BIODEGRADE READILY.

PLACEMENT:

A SLOPE BARRIER SHOULD BE USED AT THE TOE OF A SLOPE WHEN A DITCH DOES NOT EXIST. THE SLOPE BARRIER SHOULD BE PLACED ON NEARLY LEVEL GROUND 5' TO 10' AWAY FROM THE TOE OF A SLOPE. THE BARRIER IS PLACED AWAY FROM THE TOE OF THE SLOPE TO PROVIDE ADEQUATE STORAGE FOR SETTLING OUT SEDIMENT. WHEN PRACTICABLE, BALE SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. BALE SLOPE BARRIERS CAN ALSO BE PLACED ALONG RIGHT-OF-WAY FENCE LINES TO KEEP SEDIMENT FROM CROSSING ONTO ADJACENT PROPERTY. WHEN PLACED IN THIS MANNER, THE SLOPE BARRIER WILL NOT LIKELY FOLLOW CONTOURS.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH THE LENGTH OF THE PLANNED SLOPE BARRIER THAT IS 4" DEEP AND A BALE'S WIDTH WIDE. MAKE SURE THAT THE TRENCH IS EXCAVATED ALONG A SINGLE CONTOUR. WHEN PRACTICABLE, SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. PLACE THE SOIL ON THE UPSLOPE SIDE OF THE TRENCH FOR LATER USE. PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE ALONG THE CENTERLINE OF THE DITCH CHECK, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS. STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND. ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE UPSLOPE SIDE OF THE CHECK AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP.

LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WHEN PRACTICAL, DO NOT PLACE BALE SLOPE BARRIERS ACROSS CONTOURS. SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. CONCENTRATED FLOW OVER A SLOPE BARRIER CREATES A SCOUR HOLE ON THE DOWNSLOPE SIDE OF THE BARRIER. THE SCOUR HOLE EVENTUALLY UNDERMINES THE BALES AND THE BARRIER FAILS. DO NOT PLACE BALE SLOPE BARRIERS IN AREAS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE BARRIER IS NOT ANCHORED SUFFICIENTLY, IT WILL WASH OUT. BALE SLOPE BARRIERS MUST BE DUG INTO THE GROUND. BALES AT GROUND LEVEL DO NOT WORK BECAUSE THEY ALLOW WATER TO FLOW UNDER THE BARRIER.

INSPECTION AND MAINTENANCE:

BALE SLOPE BARRIERS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

- ARE THERE ANY POINTS ALONG THE SLOPE BARRIER WHERE WATER IS CONCENTRATING?
- DOES WATER FLOW UNDER THE SLOPE BARRIER?
- DOES WATER FLOW THROUGH SPACES BETWEEN ABUTTING BALES?
- ARE ANY BALES DISLODGED?
- ARE BALES DECOMPOSING DUE TO AGE AND/OR WATER DAMAGE?
- DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE SLOPE BARRIER?

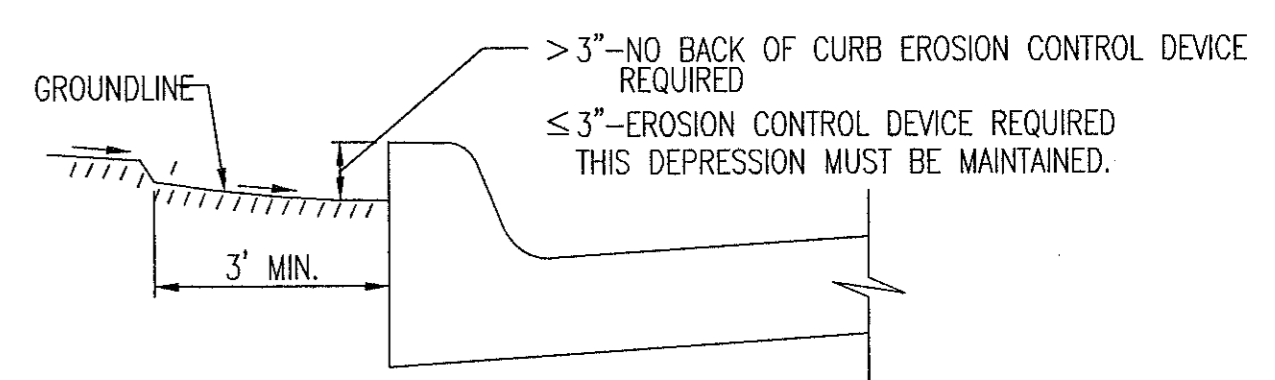
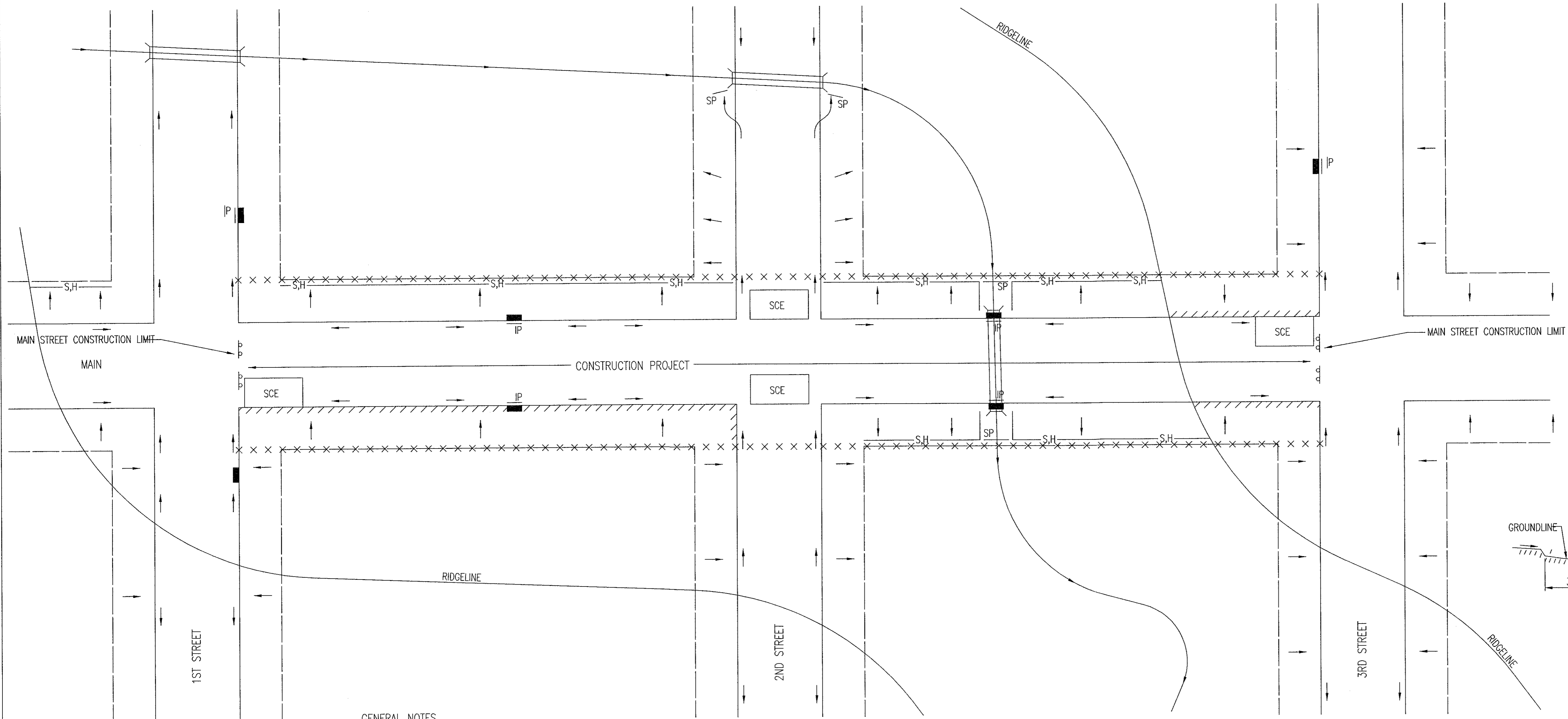
REVISION DATE: MAY 2013



<p>CITY OF WICHITA PUBLIC WORKS & UTILITIES ENGINEERING DIVISION</p>			<p>STRAW BALE DITCH CHECK AND BARRIER DETAILS</p>		
			<p>CITY ENGINEER GARY JANZEN, P.E.</p>		
PROJECT NUMBER	OCA NUMBER	DATE			
		5/2013			
CITY ENGINEER'S OFFICE			SHEET		
CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501			7 of 14		

GENERAL NOTES

1. THIS SHEET IS INTENDED TO PROVIDE GUIDELINES AS TO WHAT TYPES OF EROSION CONTROL DEVICES WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS. CONTRACTORS ARE EXPECTED TO BID PROJECTS ACCORDINGLY.
2. EROSION CONTROL DEVICES MUST BE MAINTAINED BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION PROCESS AND UNTIL THE DISTURBED EARTH IS RESTABILIZED.
3. IF THE PROJECT WILL DISTURB 1 ACRE OR MORE, A FEDERAL/STATE NPDES STORMWATER PERMIT IS REQUIRED. A DETAILED STORMWATER POLLUTION PREVENTION PLAN, IS REQUIRED. THE EROSION CONTROL DEVICES SHOWN ON THIS SHEET ARE CONSIDERED TO BE THE MINIMUM TO BE SHOWN IN THE POLLUTION PREVENTION PLAN.
4. FOR PROJECTS DISTURBING LESS THAN 1 ACRE, CONTRACTORS ARE ENCOURAGED TO PREPARE STORMWATER POLLUTION PREVENTION PLANS PRIOR TO CONSTRUCTION. EROSION CONTROL DEVICES MUST BE USED ON ALL PROJECTS.
5. FAILURE TO USE AND MAINTAIN EROSION CONTROL DEVICES IS A VIOLATION OF SECTION 16.32 OF THE CITY CODE AND WILL SUBJECT THE CONTRACTOR TO THE PENALTIES PROVIDED FOR THEREIN.
6. THE APPLICATION OF EROSION CONTROL DEVICES SHOWN ON THIS SHEET IS FOR SITUATIONS NORMALLY ENCOUNTERED. FROM TIME TO TIME, SITUATIONS WILL ARISE THAT MAY REQUIRE A DIFFERENT DEVICE OTHER THAN THOSE SHOWN. EROSION CONTROL DEVICES, OTHER THAN THOSE SHOWN, MAY BE UTILIZED AS LONG AS THEY ARE EFFECTIVE AND MAINTAINED.



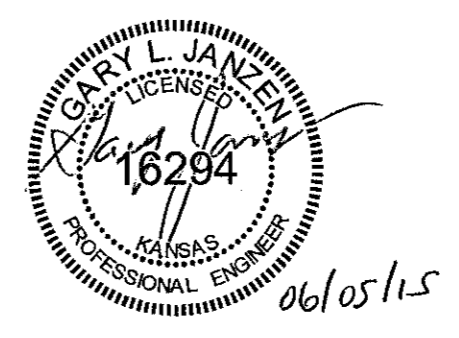
THIS IS A TEMPORARY MEASURE ONLY, WHEN APPROVED BY THE PROJECT ENGINEER. THE DIRT GRADE BEHIND THE CURB SHALL BE BROUGHT TO THE TOP OF CURB, WITH TEMPORARY EROSION CONTROL MAT OR PERMANENT VEGETATION PLACED, PRIOR TO THE COMPLETION OF ALL PROJECTS.

GENERAL NOTES

1. THE INTENT OF ALL EROSION CONTROL DEVICES IS TO KEEP ALL SEDIMENT CONFINED TO THE CONSTRUCTION SITE, AND OUT OF ALL UNDERGROUND PIPES, DITCHES, LAKES, AND OTHER DRAINAGE FACILITIES, AND OFF OF STREETS.
2. THE POINT OF COMPLIANCE IS GENERALLY THE RIGHT-OF-WAY LINES WITHIN THE LIMITS OF CONSTRUCTION.
3. EROSION CONTROL DEVICES WILL BE REQUIRED AT ALL POINTS ALONG THE PROJECT WHERE DISTURBED EARTH CAN DRAIN ONTO PRIVATE PROPERTY.
4. INLET PROTECTION DEVICES WILL BE REQUIRED WHEREVER WATER CAN DRAIN OFF THE PROJECT SITE INTO AN INLET, INCLUDING ANY SIDE STREET INLETS.
5. EROSION CONTROL DEVICES SHALL BE INSTALLED AT CREEK CROSSINGS SO AS TO PREVENT SEDIMENT FROM ENTERING THEREIN.
6. STABILIZED CONSTRUCTION ENTRANCES SHALL BE PROVIDED, AS NEEDED, TO PREVENT MUD FROM TRACKING ONTO STREETS NOT UNDER CONSTRUCTION AND ON STREETS WITHIN THE PROJECT LIMITS IF TRAFFIC IS BEING MAINTAINED THROUGH THE PROJECT.
7. ANY MUD TRACKED ONTO STREETS MUST BE REMOVED AT THE END OF EACH WORK DAY.
8. THE CONTRACTOR WILL BE REQUIRED TO PLACE EROSION CONTROL DEVICES BACK OF CURB, WHENEVER WATER CAN DRAIN OVER CURB, TO KEEP ERODED SOIL OUT OF THE GUTTERLINES, IN ACCORDANCE WITH THE FOLLOWING:
 - A. THE DEVICE REQUIRED WILL BE APPROVED EROSION CONTROL MAT LISTED ON THE CITY'S APPROVED MATERIAL LIST. SAID BLANKET SHALL BE PLACED OVER THE APPROPRIATE SEED AND FERTILIZER, AS SPECIFIED IN THE PROJECT SPECIFICATIONS. (SEE SOIL EROSION BMPs - BACK OF CURB SEDIMENT BARRIER DETAILS)
 - B. THIS DEVICE SHALL BE INSTALLED IMMEDIATELY WHENEVER THE CURB IS BACKFILLED TO WITHIN 3" OF THE TOP OF CURB. (SEE CURB BACKFILL DETAIL) OTHER BMP'S MAY BE REQUIRED AT LOCATIONS WHERE CONCENTRATED FLOW CARRIES SEDIMENT OVER THE CURB.
 - C. ADDITIONALLY, OTHER EROSION CONTROL DEVICES (HAY BALES, SILT FENCE, ETC.) WILL BE INSTALLED AT LOCATIONS OF CONCENTRATED FLOW RESULTING IN SEDIMENT OVERRUNNING THE MAT.
 - D. SHOULD THE PROJECT PLANS SPECIFY THAT THE RIGHT-OF-WAY IS TO BE SODDED, THE EXCELSIOR MAT WILL NOT BE REQUIRED SO LONG AS THE SOD IS PLACED WITHIN 48 HOURS AFTER CURB BACKFILL REACHES A HEIGHT OF 3" OR LESS FROM TOP OF CURB. (SEE CURB BACKFILL DETAIL)

LEGEND

- R-O-W LIMITS
- DRAINAGE FLOW PATH
- × × × × R/W LIMIT WITHIN CONSTRUCTION LIMIT
- STORM WATER INLETS
- IP INLET PROTECTION
- S,H SILT FENCE OR HAY BALE BARRIER
- SP STREAM PROTECTION
- SCE STABILIZED CONSTRUCTION ENTRANCE
- ////// BACK OF CURB PROTECTION

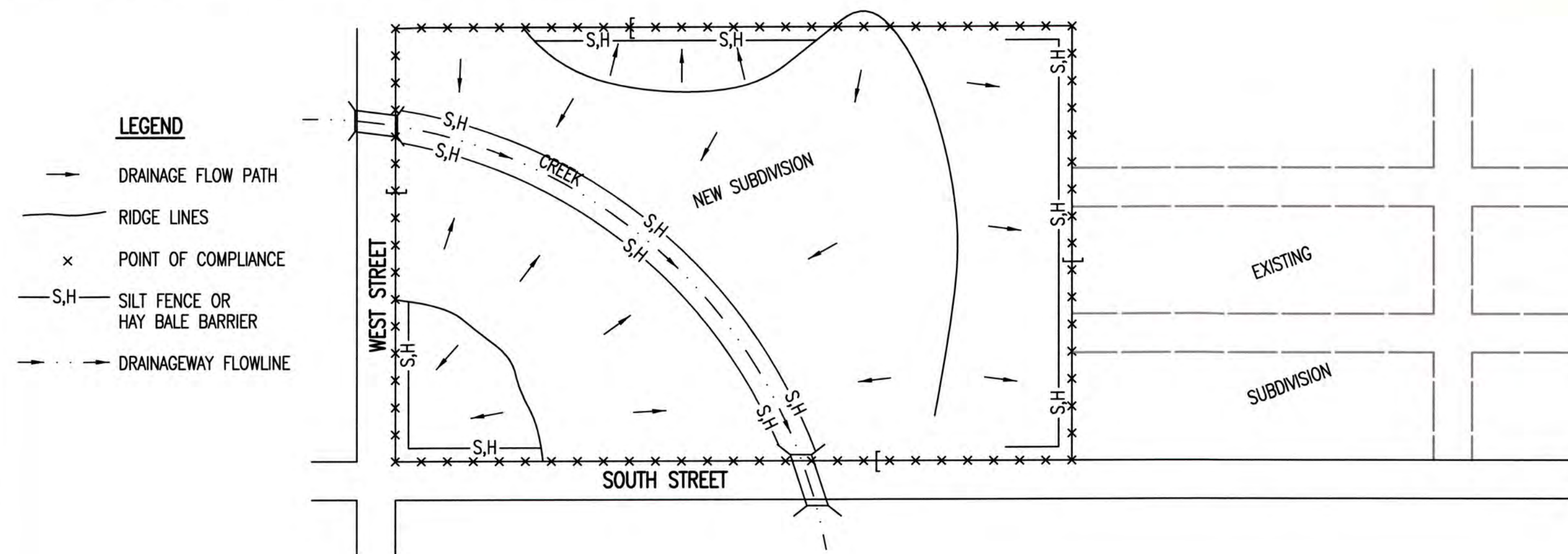


CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

STREET IMPROVEMENT PROJECTS		
CITY ENGINEER GARY JANZEN, P.E.		
PROJECT NUMBER	OCA NUMBER	DATE 9/2015
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		SHEET 8 of 14

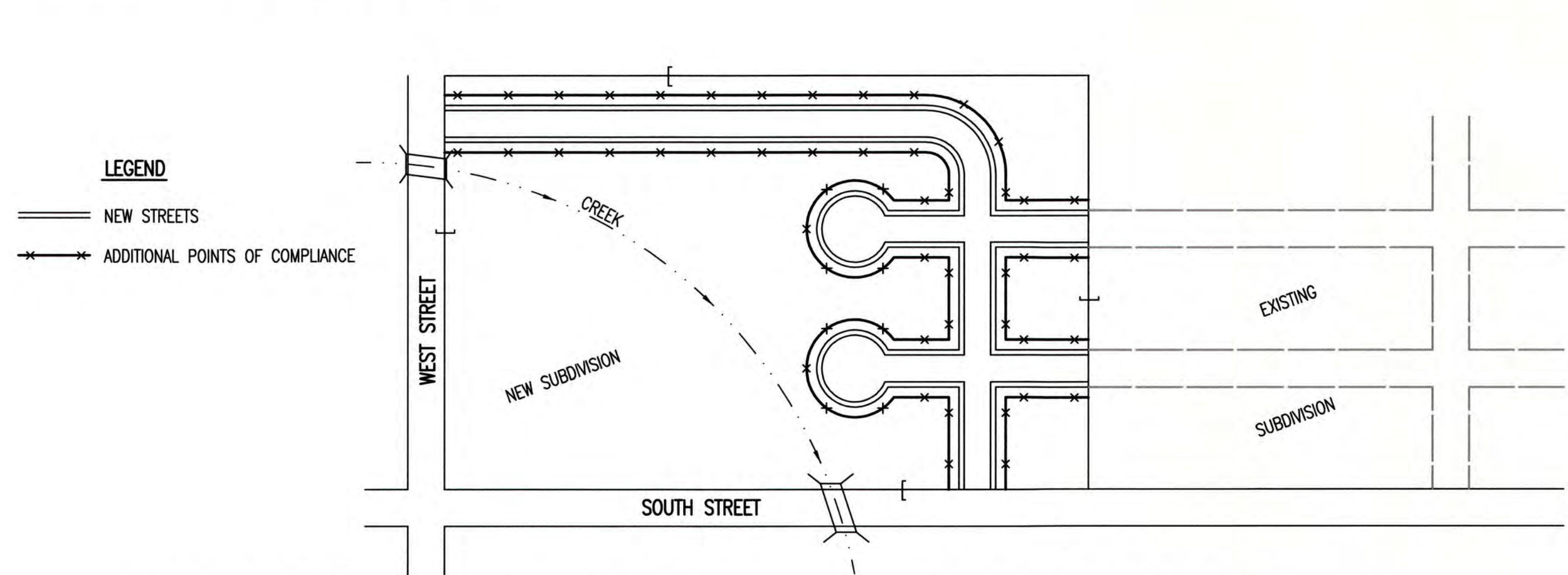
REVISION: JUNE 2015

PHASE 1 – INITIAL EARTHWORK AND UTILITIES (EXCEPT STORM SEWER)



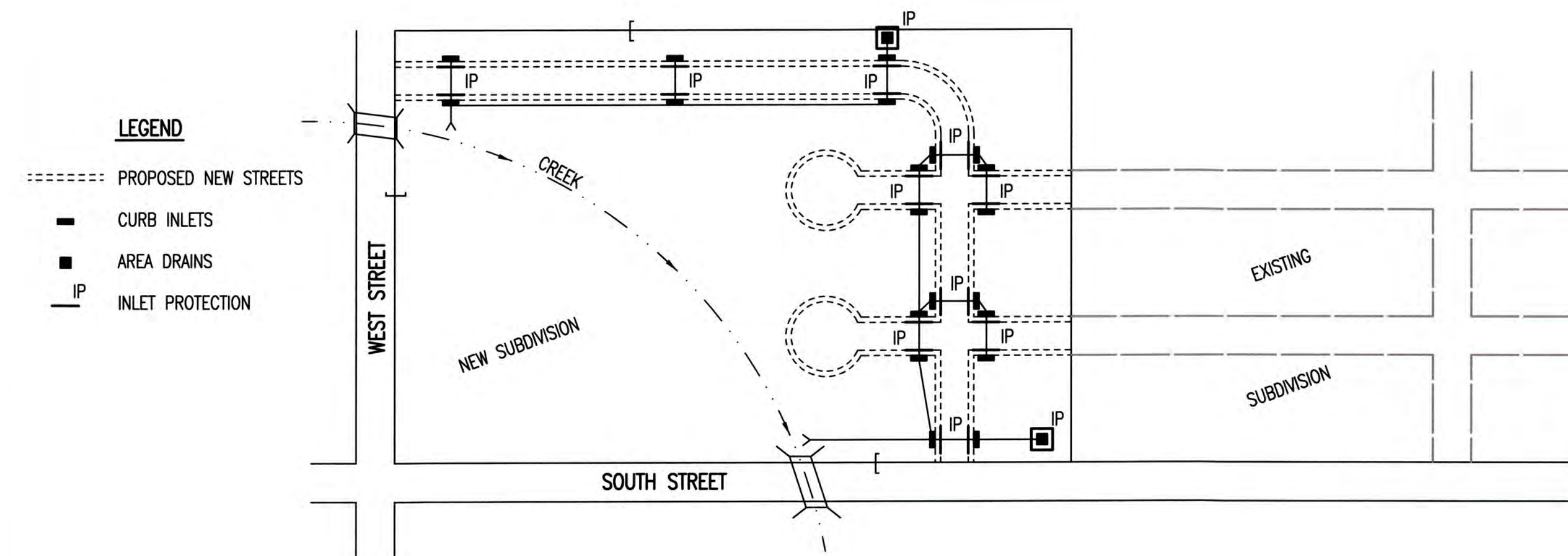
- DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, THE POINTS OF COMPLIANCE ARE THE PERIMETER BOUNDARIES AND ANY DRAINAGE WAYS OR STORM SEWERS DRAINING THROUGH OR FROM THE SITE. SHOULD LAKES BE CONSTRUCTED WITHIN THE SUBDIVISION THAT WILL DISCHARGE DURING STORMS, THEY ARE ALSO A POINT OF COMPLIANCE.
- HAY BALES OR SILT FENCE MUST BE CONSTRUCTED ALONG THE PROPERTY LINE WHERE ON SITE WATER CAN DRAIN OFF THE PROPERTY. THESE EROSION CONTROL DEVICES WILL ALSO BE INSTALLED ALONG ANY DRAINAGE DITCH OR LAKE THAT CAN DISCHARGE.
- SHOULD SILT OR SEDIMENT ENTER THE DITCHES OR STREETS ON THE ADJACENT BOUNDARY STREETS, APPROPRIATE EROSION CONTROL DEVICES WILL BE PLACED WITHIN THE SUBDIVISION TO PREVENT THIS.
- ANY MUD TRACKED ONTO ADJACENT STREETS WILL BE REMOVED WITHIN 48 HOURS OR BY FRIDAY AT 6:00 PM, WHICHEVER IS EARLIER.
- CONTRACTORS WORKING WITHIN THE SITE WILL NOT BE REQUIRED TO USE INDIVIDUAL EROSION CONTROL DEVICES AS LONG AS THOSE SPECIFIED ABOVE ARE IN PLACE AND EFFECTIVE. CONTRACTORS WORKING ON THE BOUNDARY LINE STREETS OR ON ADJACENT PROPERTIES TO EXTEND UTILITIES ARE EXPECTED TO USE EROSION CONTROL DEVICES AT THEIR WORK LOCATIONS, AS NEEDED.
- UTILIZE STABILIZED CONSTRUCTION ENTRANCE AT ENTRANCE AND EXIT ONTO ANY EXISTING PUBLIC STREETS.
- IF THE INITIAL EARTH WORK AND UTILITIES ARE DONE AS PART OF A PUBLIC IMPROVEMENT PROJECT, THESE EROSION CONTROL DEVICES WILL BE INSTALLED BY THE CONTRACTOR AS SPECIFIED IN THE INDIVIDUAL PROJECT CONTRACTS. THE CONTRACTOR WILL MAINTAIN THE DEVICES UNTIL COMPLETION OF THE CONTRACT, AT WHICH TIME THE DEVELOPER WILL ASSUME MAINTENANCE RESPONSIBILITIES. IF THESE CONTRACTS ARE NOT PUBLIC IMPROVEMENT PROJECTS, THE DEVELOPER WILL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING THESE DEVICES.
- WITHIN 14 DAYS OF COMPLETION OF EARTHWORK ACTIVITIES IN ANY GIVEN AREA, THAT AREA SHALL BE TEMPORARILY OR PERMANENTLY SEEDED AND MULCHED.

PHASE 3 – STREET CONSTRUCTION



- DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, NEW STREETS ARE INSTALLED. ALL EROSION CONTROL DEVICES INSTALLED DURING PHASE 1 AND 2 MUST STILL BE MAINTAINED. THE POINT OF COMPLIANCE NOW SHIFTS TO THE BACK OF CURB ALONG EACH STREET.
- CURB OPENING INLET PROTECTION:
 - SUMP AREAS – INLET PROTECTION SHALL BE PROVIDED WHEN STREET SUBGRADE WORK IS COMPLETED.
 - NON-SUMP LOCATIONS – PROVIDE INLET PROTECTION AS SOON AS BASE COURSE ASPHALT IS INSTALLED, BEFORE THE SURFACE COURSE LIFT.
- EROSION CONTROL DEVICES WILL BE REQUIRED BACK OF CURB WHEREVER WATER CAN FLOW OVER THE CURB AND THE CURB HAS BEEN BACKFILLED TO WITHIN 3" OR LESS OF THE TOP OF CURB (SEE CURB BACKFILL DETAIL). FOR CURBS NOT YET ENTIRELY BACKFILLED (3" OR MORE BELOW TOP OF CURB), ADDITIONAL DEVICES WILL BE REQUIRED AT POINTS WHERE WATER BREAKS OVER CURB WHICH COULD RESULT IN THE PLACEMENT OF SEDIMENT IN THE GUTTER.
- SEE DETAIL SHEET FOR BACK OF CURB PROTECTION.
- THE BACK OF CURB PROTECTION SPECIFIED ON THIS PLAN MAY HAVE TO BE SUPPLEMENTED WITH HAY BALE OR SILT FENCE EROSION CONTROL DEVICES AT LOCATIONS WHERE CONCENTRATED FLOW RESULTS IN SEDIMENT BEING CARRIED OVER THE EXCELSIOR MATS.
- THE STREET CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING BACK OF CURB EROSION CONTROL DEVICES.
- THE INDIVIDUAL LOT OWNERS WILL BE RESPONSIBLE FOR MAINTAINING THE BACK OF CURB EROSION CONTROL DEVICES IN FRONT OF THEIR LOTS UNTIL SUCH TIME AS ADJACENT DISTURBED EARTH IS STABILIZED WITH GRASS OR SOD.

PHASE 2 – INSTALLATION OF STORM SEWER

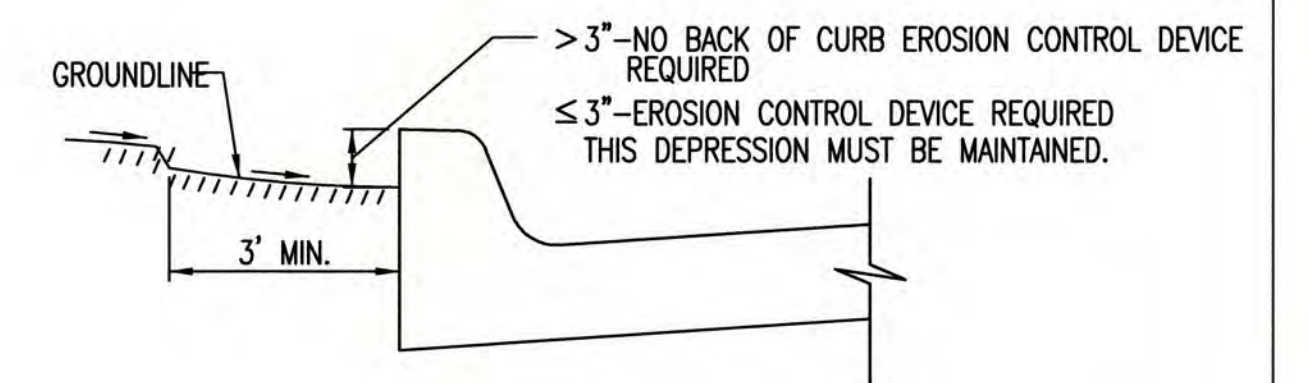


- DURING THIS PHASE OF SUBDIVISION DEVELOPMENT, ALL EROSION CONTROL DEVICES REQUIRED IN PHASE 1 SHALL REMAIN IN PLACE AND BE MAINTAINED.
- AS NEW STORM SEWERS, WITH INLETS, ARE INSTALLED, THE STORM SEWERS MUST NOW BE PROTECTED SO ALL NEW INLETS BECOME POINTS OF COMPLIANCE.
- AREA DRAINS – AS SOON AS WATER CAN FLOW INTO THESE DRAINS, HAY BALE OR SILT FENCE PROTECTION WILL BE INSTALLED AROUND THEM.
- CURB OPENING INLETS – AS SOON AS WATER CAN FLOW INTO THESE DRAINS, INLET PROTECTION DEVICES MUST BE INSTALLED. IF WATER CANNOT FLOW INTO CURB INLETS UNTIL STREET CONSTRUCTION IS COMPLETE, THEN STREET CONTRACTOR WILL INSTALL INLET PROTECTION. SEE PHASE 3 – STREET CONSTRUCTION.
- THE STORM SEWER CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING THESE DEVICES.
- THE SUBDIVISION DEVELOPER WILL MAINTAIN THESE EROSION CONTROL DEVICES ONCE INSTALLED.
- ALL DISTURBED GROUND WILL BE FINAL GRADED AND TEMPORARILY OR PERMANENTLY SEEDED WITHIN 14 DAYS IF COMPLETION OF WORK IN ANY GIVEN PART OF THE SUBDIVISION.
- ONCE ALL DISTURBED GROUND DRAINING TO AN INLET HAS BEEN RESTABILIZED WITH GRASS OR SOD, THE SUBDIVISION DEVELOPER WILL BE RESPONSIBLE FOR PERMANENTLY REMOVING THE INLET PROTECTION.

GENERAL NOTES

- THE INTENT OF ALL EROSION CONTROL DEVICES IS TO PREVENT ERODED SOIL FROM ENTERING DITCHES, STORM SEWERS, LAKES, STREETS OR ANY OTHER OTHER DRAINAGE FEATURE.
- THIS SHEET IS INTENDED TO PROVIDE GUIDELINES AS TO WHAT TYPE OF EROSION CONTROL DEVICES WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS. CONTRACTORS ARE EXPECTED TO BID PROJECTS ACCORDINGLY.
- EROSION CONTROL DEVICES SHALL BE MAINTAINED DURING THE CONSTRUCTION PROCESS TO REMAIN EFFECTIVE. MAINTENANCE SHALL BE AS INDICATED ON SOIL EROSION BMP'S DETAIL SHEETS.
- PERSONS DESTROYING EROSION CONTROL DEVICES SHALL BE RESPONSIBLE FOR IMMEDIATELY REPAIRING THEM OR INSTALLING SUITABLE REPLACEMENT DEVICES.
- THE DEVELOPMENT OF ANY SUBDIVISION THAT DISTURBS 1 ACRE OR MORE WILL REQUIRE A FEDERAL/STATE NPDES STORMWATER PERMIT. THE PREPARATION OF A STORMWATER POLLUTION PREVENTION PLAN IS REQUIRED. EROSION CONTROL DEVICES ARE REQUIRED. THE DETAILS SHOWN ON THIS SHEET ARE THE MINIMUM STANDARDS TO BE SHOWN ON POLLUTION PREVENTION PLANS.
- FOR SUBDIVISIONS SMALLER THAN 1 ACRE, SOIL EROSION DEVICES ARE REQUIRED. ALSO, DEVELOPERS AND CONTRACTORS ARE ENCOURAGED TO DEVELOP POLLUTION PREVENTION PLANS FOR EACH PROJECT PRIOR TO CONSTRUCTION.
- FAILURE TO USE AND MAINTAIN SOIL EROSION DEVICES IS A VIOLATION OF SECTION 16.32 OF THE CITY CODE AND WILL SUBJECT THE SUBDIVISION DEVELOPER AND CONTRACTORS TO THE PENALTIES PROVIDED THEREIN.
- THE APPLICATION OF EROSION CONTROL DEVICES SHOWN ON THIS SHEET IS FOR SITUATIONS NORMALLY ENCOUNTERED. FROM TIME TO TIME, SITUATIONS WILL ARISE THAT MAY REQUIRE DEVICES OTHER THAN THAT SHOWN. EROSION CONTROL DEVICES, OTHER THAN THOSE SHOWN, MAY BE UTILIZED SO LONG AS THEY ARE EFFECTIVE AND MAINTAINED.
- A STABILIZED EARTH SURFACE IS DEFINED AS ONE THAT IS HARD SURFACED WITH CONCRETE, ASPHALT, OR THE LIKE, OR ONE ON WHICH 70% OF THE GRASS HAS GERMINATED ON THE ENTIRE SURFACE.

SEE DETAIL SHEET FOR BACK OF CURB PROTECTION DETAIL



CURB BACKFILL DETAIL (STREET CONSTRUCTION ONLY)

THIS IS A TEMPORARY MEASURE ONLY, WHEN APPROVED BY THE PROJECT ENGINEER. THE DIRT GRADE BEHIND THE CURB SHALL BE BROUGHT TO THE TOP OF CURB, WITH TEMPORARY EROSION CONTROL MAT OR PERMANENT VEGETATION PLACED, PRIOR TO THE COMPLETION OF ALL PROJECTS.

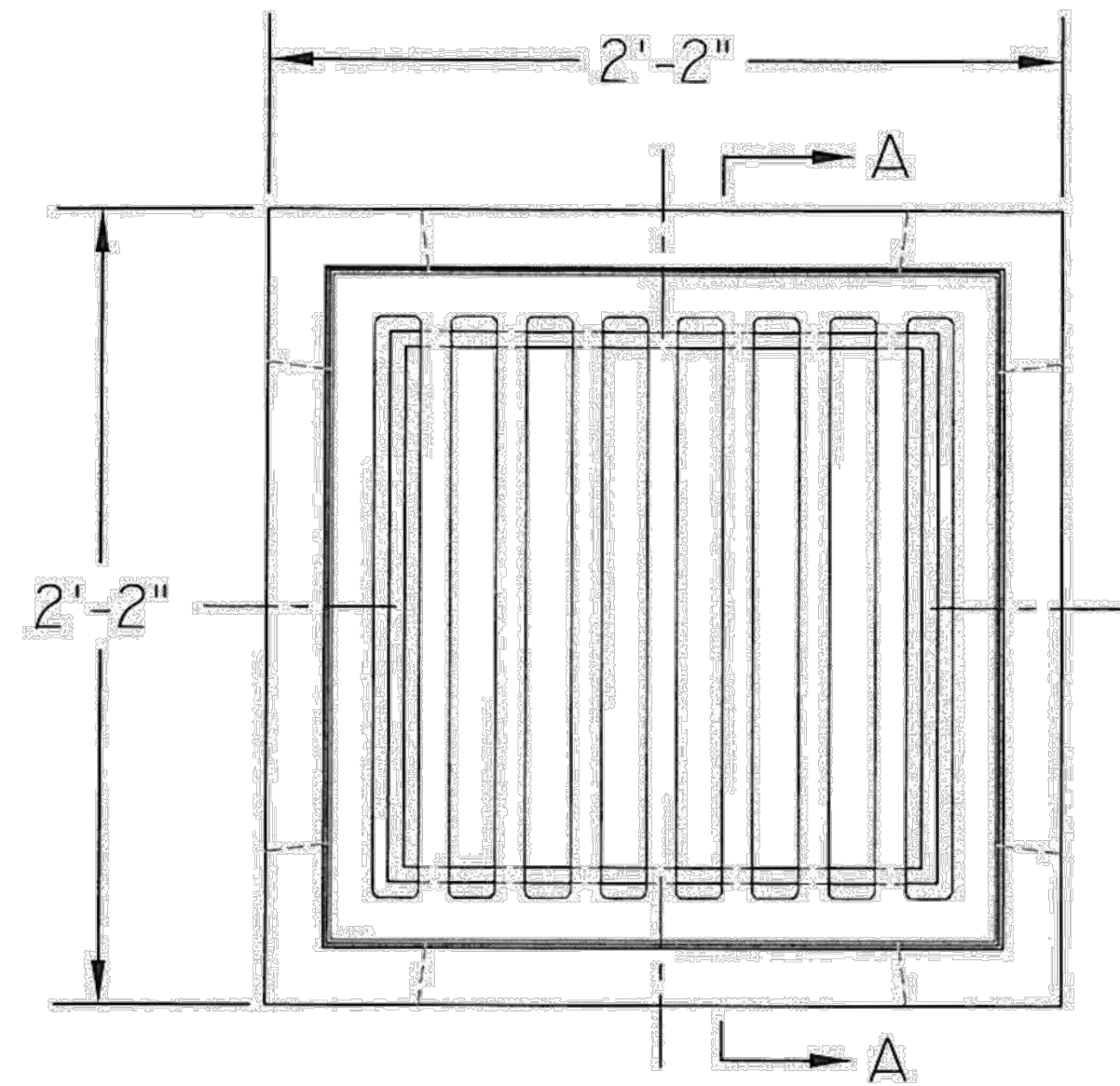
REVISION DATE: MAY 2013



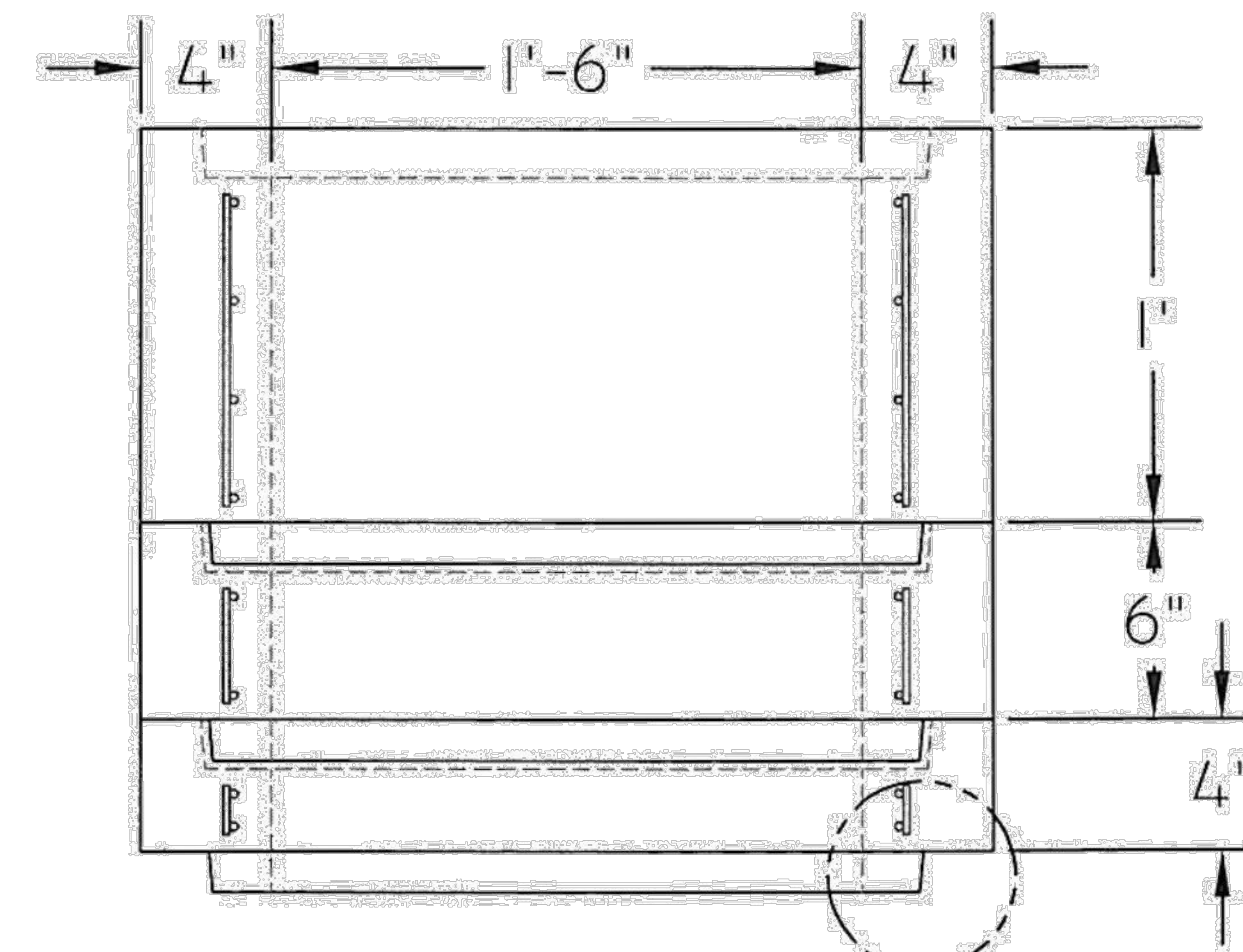
SUBDIVISION DEVELOPMENT PROCESS		
CITY ENGINEER GARY JANZEN, P.E.		
PROJECT NUMBER	OCA NUMBER	DATE
		5/2013
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		SHEET
		9 of 14

CONSTRUCTION NOTES:

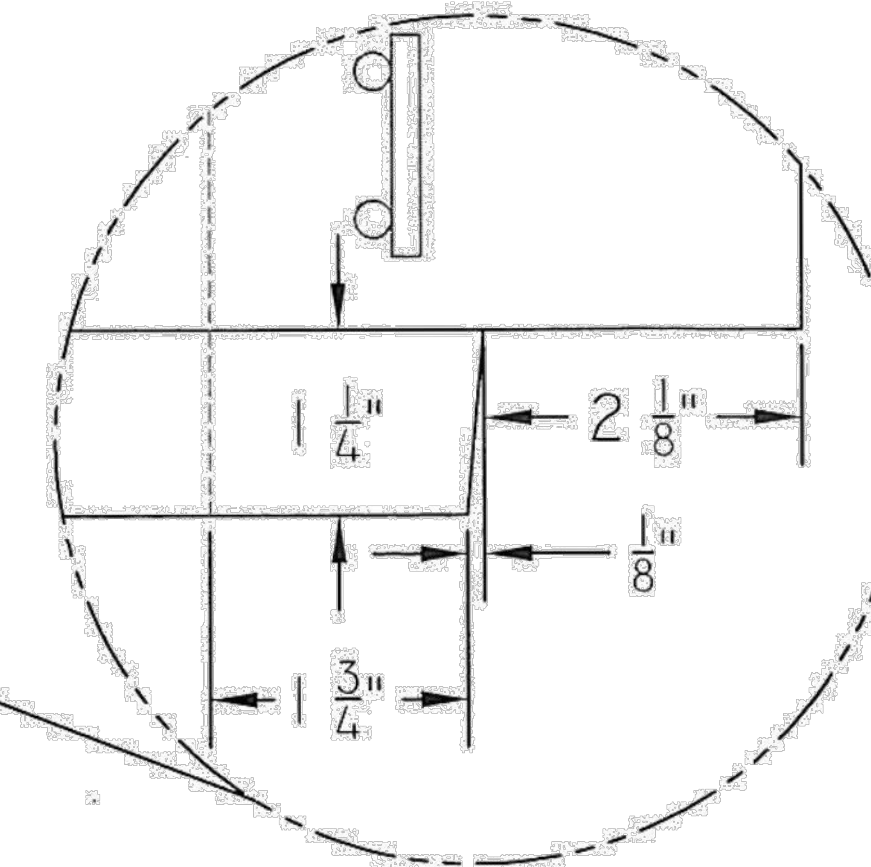
1. ALL REINFORCING TO BE W5.0 x W3.0 3x6 WWF AND TO HAVE 1" CLEAR FROM INSIDE FACE.



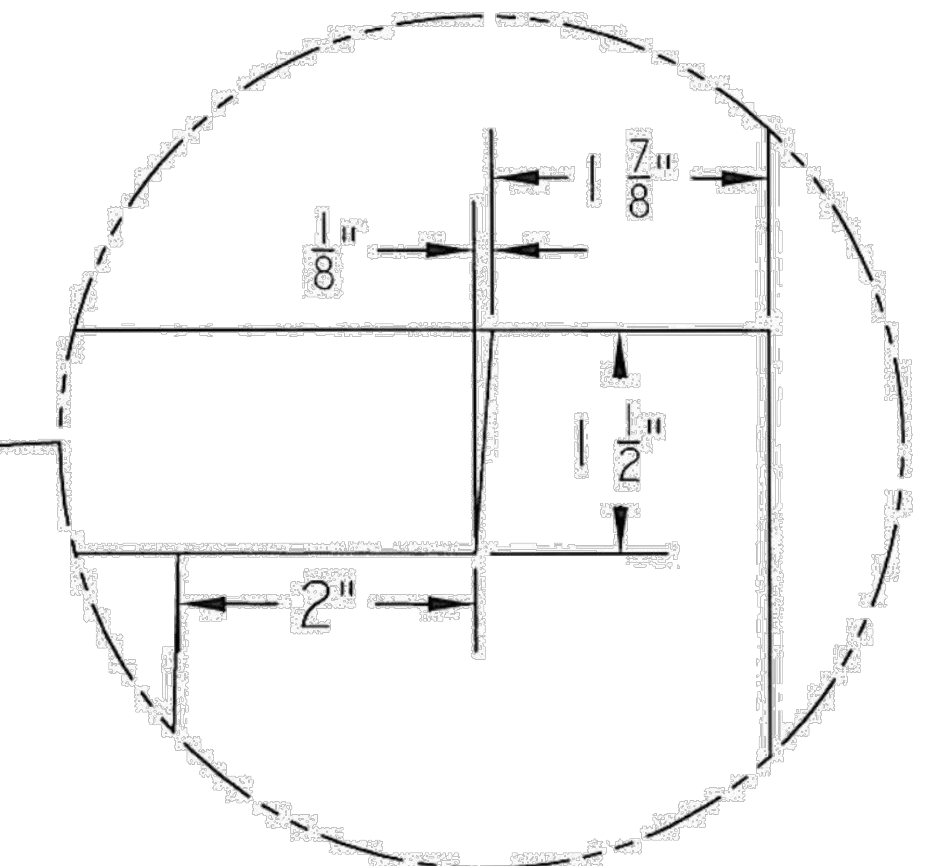
PLAN VIEW
REINFORCING REMOVED FOR CLARITY



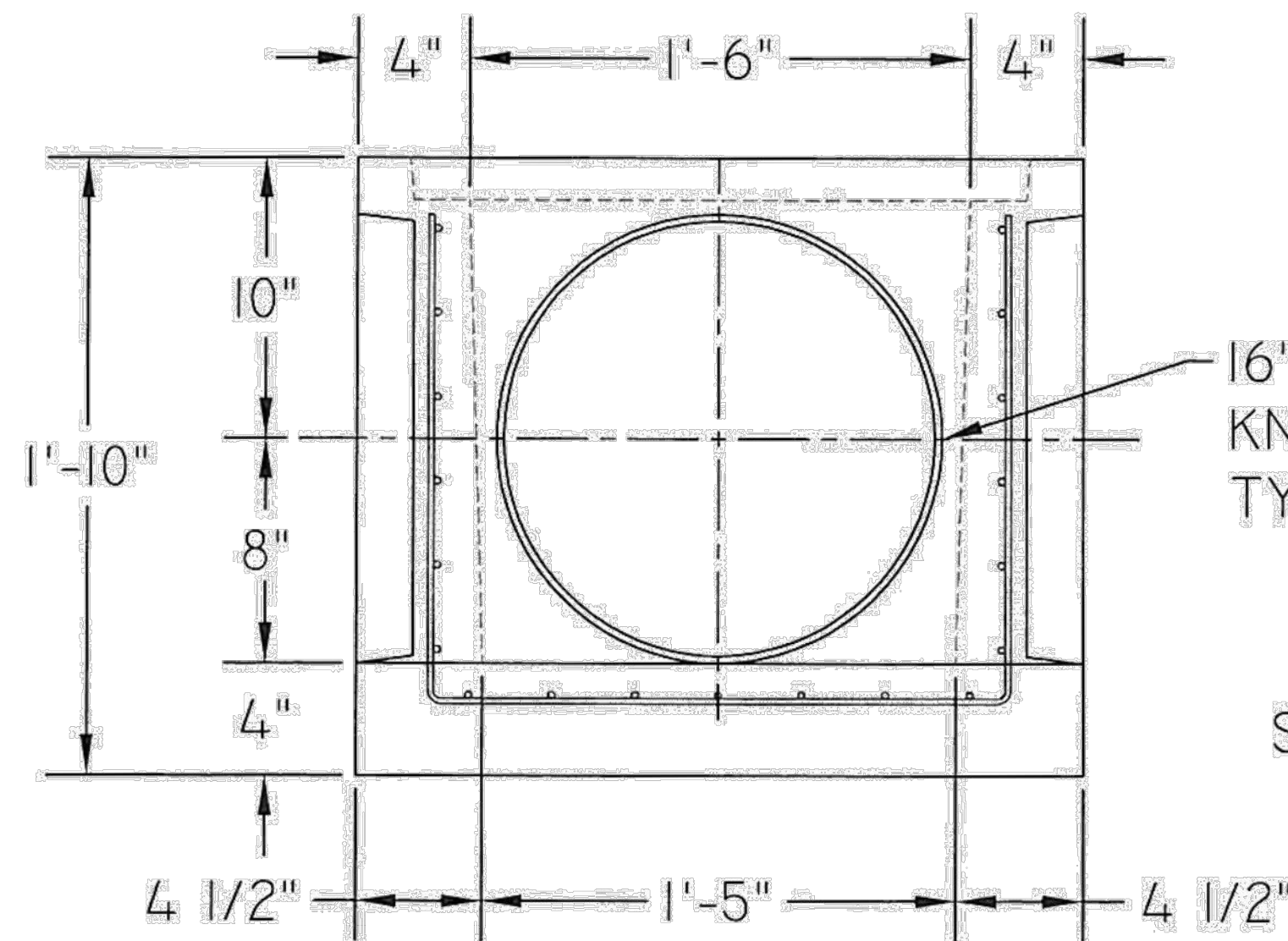
PROFILE VIEW
RISER OPTIONS



NOTCH DETAIL
SPIGOT END



NOTCH DETAIL
BELL END
GRATE & REINFORCING REMOVED

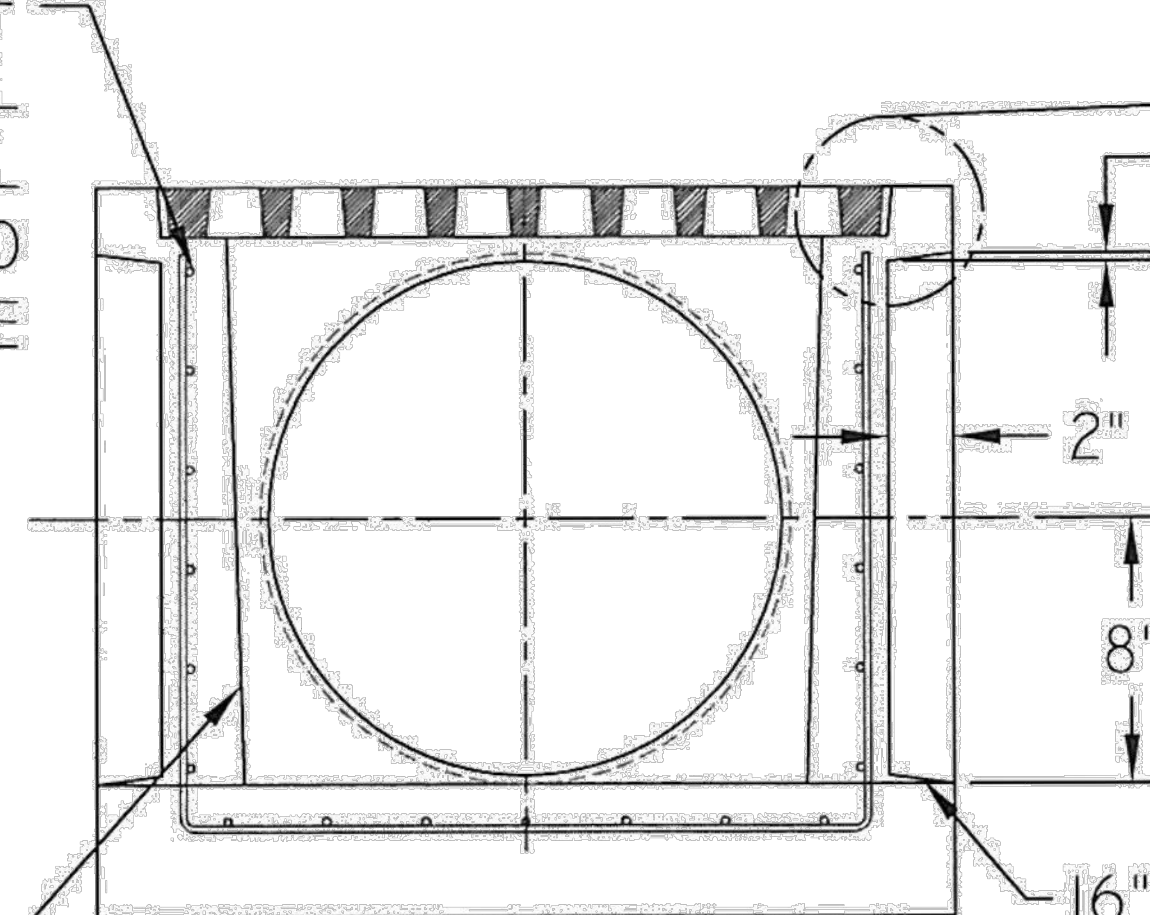


PROFILE VIEW
TYP. SIDE 'A', 'B', 'C', & 'D'
GRATE REMOVED

W5 x W3 3x6 WWF
W5=HORIZONTAL
W3=VERTICAL
1" CLEAR TO INSIDE FACE

16" DIA KNOCKOUT
TYP. ALL WALLS

SLOPED WALL FOR STRIPPING



SECTION A-A VIEW

16" DIA KNOCKOUT
TO HAVE 1/4" TAPER
& EXTEND 2" INTO WALL

WICHITA CONCRETE PIPE COMPANY
221 W. 37th St. North, Wichita, KS. 67204 (316)-838-8651

RAINLEADER STRUCTURE

WCP RAINLEADER STRUCTURE

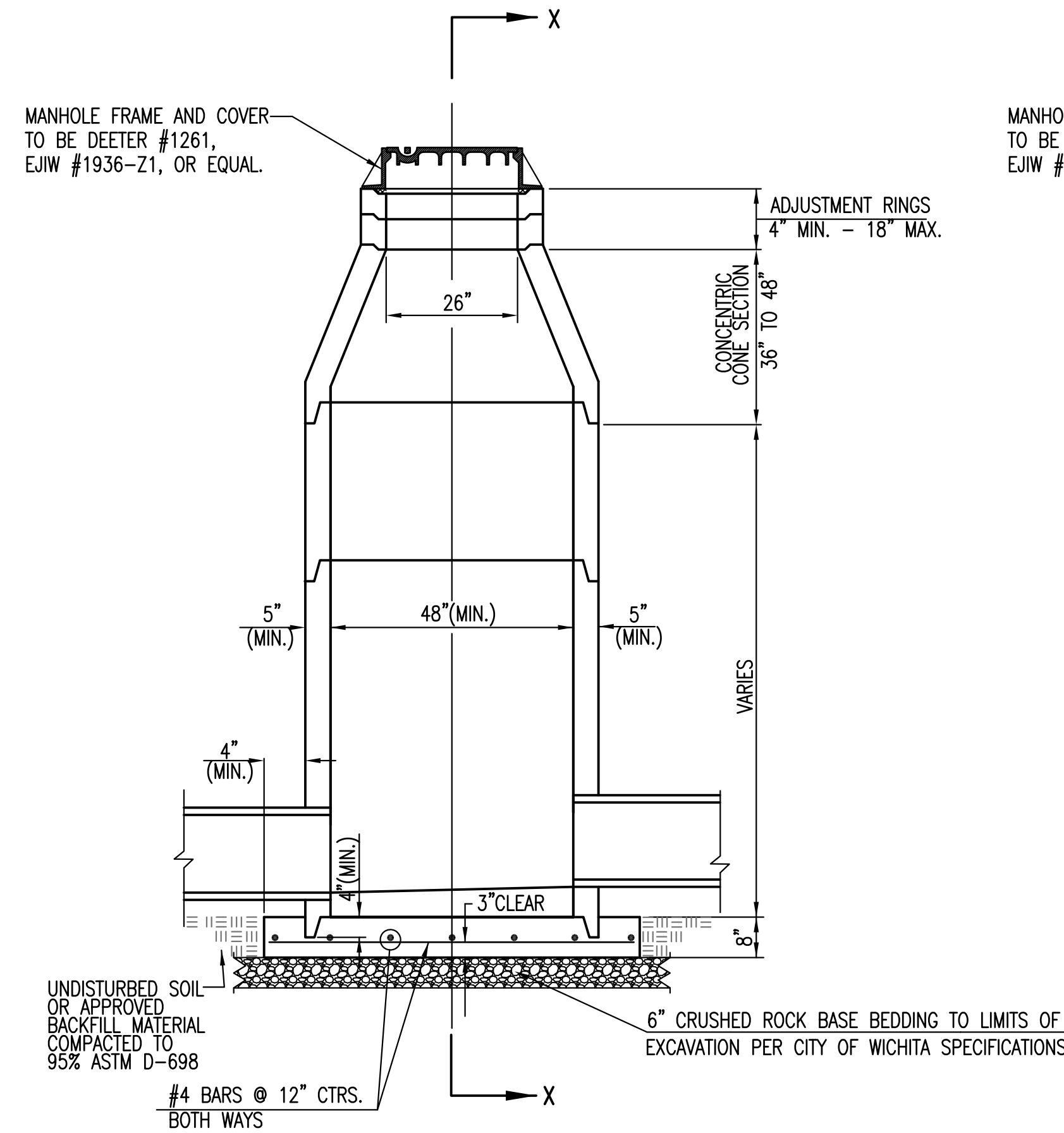
RAINLEADER STRUCTURE.DWG 09/19/14 DBH

Baughman Waterfront 7th Addition
Rainleader Structure Details
Private Project Drainage

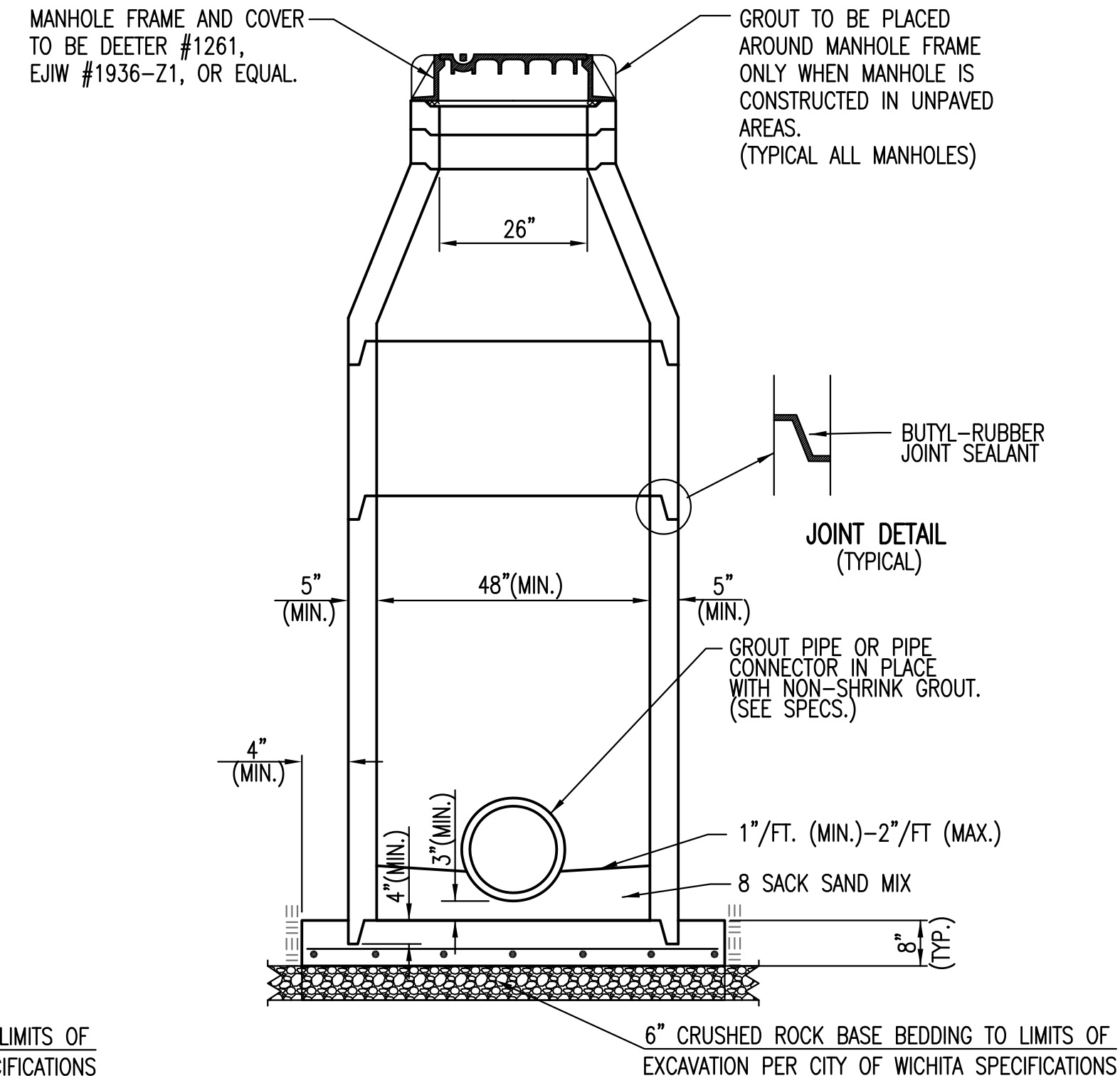
Baughman Company, P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

PROJECT NUMBER	DESIGN	DRAWN
REVISIONS:	APPROVED	DATE
	None	4/13
	SCALE	None
	SHEET	10 OF 14

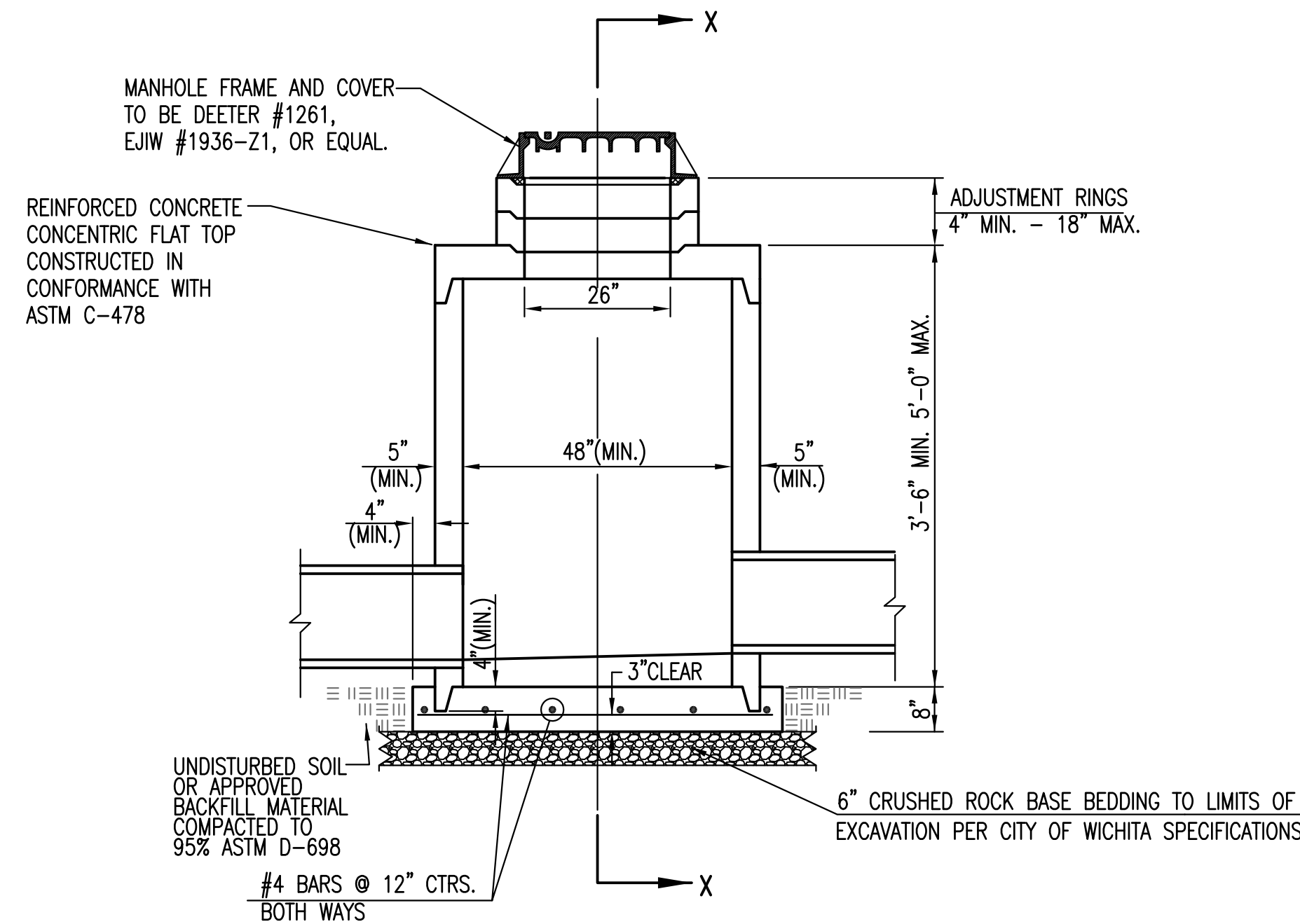
INLET DETAILS.dwg



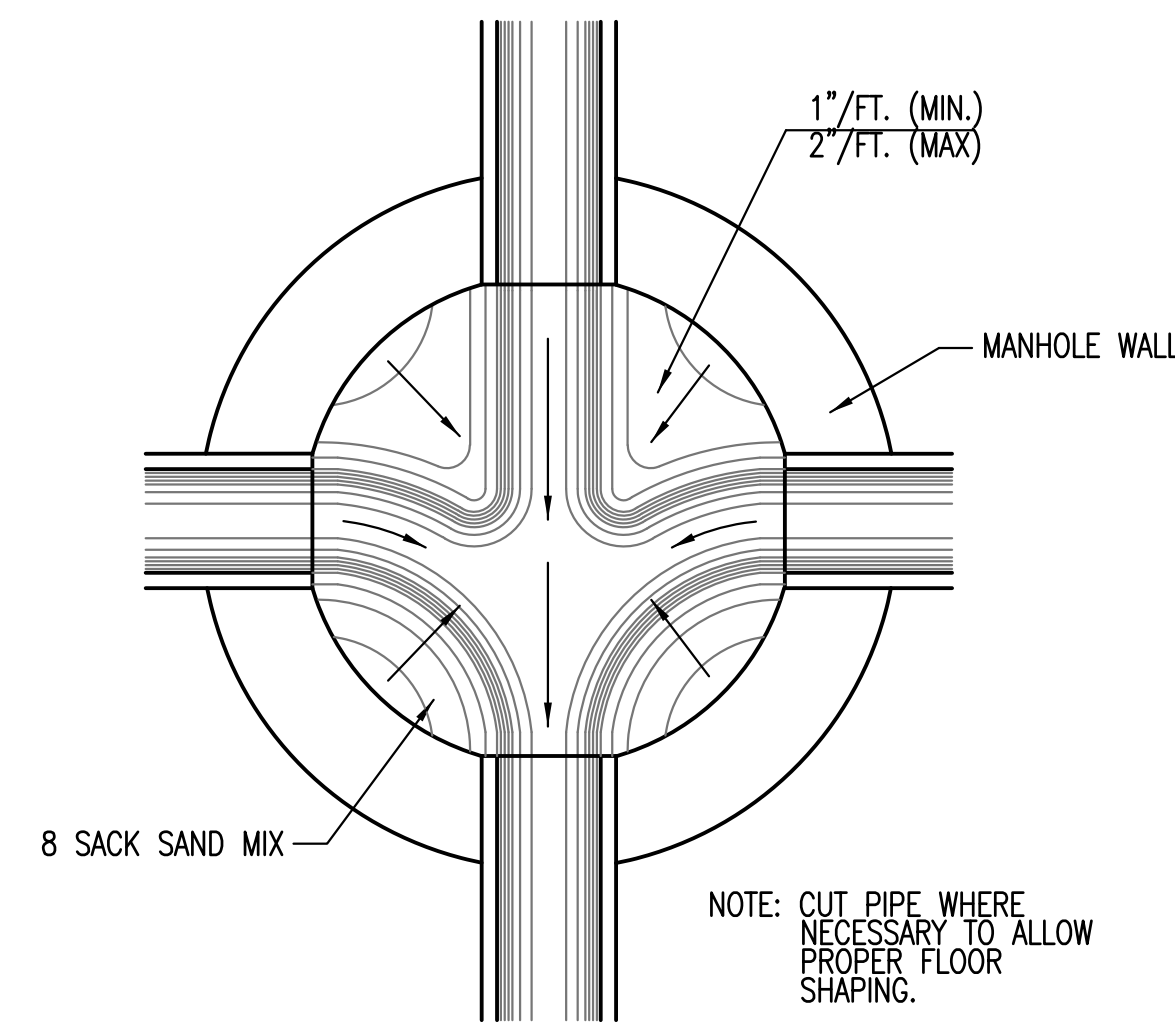
PRECAST STANDARD MANHOLE TYPE "A"



SECTION X-X (TYPICAL)



PRECAST SHALLOW MANHOLE TYPE "B"



TYPICAL MANHOLE FLOOR SHAPING

GENERAL NOTES

- IF, IN THE OPINION OF THE ENGINEER, THE MANHOLE SUBGRADE APPEARS UNSTABLE, THE CONTRACTOR WILL HAVE THE OPTION TO COMPACT SUBGRADE AS SHOWN OR INCREASE THE THICKNESS OF THE MANHOLE BASE AS DIRECTED BY THE ENGINEER.
- STEEL REINFORCING WILL BE REQUIRED IN ALL MANHOLE BASES.
- ALL MANHOLE CONSTRUCTION SHALL BE WATER TIGHT.
- TOP OF MANHOLE FLOOR SLAB SHALL BE AT LEAST 3 INCHES BELOW THE FLOW LINE OF THE OUTLET PIPE TO INSURE SUFFICIENT MINIMUM THICKNESS OF SHAPED INVERT.
- ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISION OF ASTM C-478 AS MODIFIED BY THE SPECIFICATIONS.
- CONCRETE USED FOR MANHOLE CONSTRUCTION SHALL CONFORM TO CITY OF WICHITA SPECIFICATIONS FOR CONCRETE PAVEMENT MIX.
- PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO MANHOLE BASE.
- MANHOLES WITH PIPE SIZES 24" AND LARGER SHALL HAVE 5 FOOT INSIDE DIAMETER (MIN.).
- MANHOLES WITH PRECAST BASES MAY BE USED AT THE CONTRACTORS OPTION. THESE MANHOLES SHALL HAVE AN 8" MINIMUM BASE THICKNESS AND SHALL BE PLACED ON AN 8" MIN. CRUSHED ROCK BASE. PIPES SHALL BE ENCASED WITH CRUSHED ROCK TO AT LEAST 3 FEET FROM THE MANHOLE WALL.
- CONTRACTOR SHALL REMOVE LIFTING HOOKS AFTER INSTALLATION. RECESSES IN MANHOLE WALL SHALL BE GROUTED FLUSH TO THE MANHOLE WALL WITH HYDRAULIC CEMENT AFTER THE MANHOLE IS IN PLACE. LIFTING HOLES THRU THE MANHOLE WALL WILL NOT BE ACCEPTED.
- THE ENDS OF ALL PIPES IN MANHOLES SHALL BE CUT OFF FLUSH WITH THE INSIDE FACE OF THE MANHOLE WALL.
- MANHOLE INVERT SHALL BE SHAPED WITH 8 SACK SAND MIX CONCRETE TO CREATE FLOW CHANNELS AND TO INCREASE HYDRAULIC EFFICIENCY SUCH THAT THE MANHOLE WILL BE SELF CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.
- MANHOLE FRAME AND COVER TO BE DEETER #1261, EJIW #1936-Z1, OR APPROVED EQUAL, SEE SW-303.
- FOR FLAT GRATED INLET APPLICATION, GRATE TO BE DEETER #1933, EJIW #1205 MDI, OR APPROVED EQUAL.
- FOR BEEHIVE GRATE APPLICATION, GRATE TO BE DEETER #4495, EJIW #120545, OR APPROVED EQUAL.

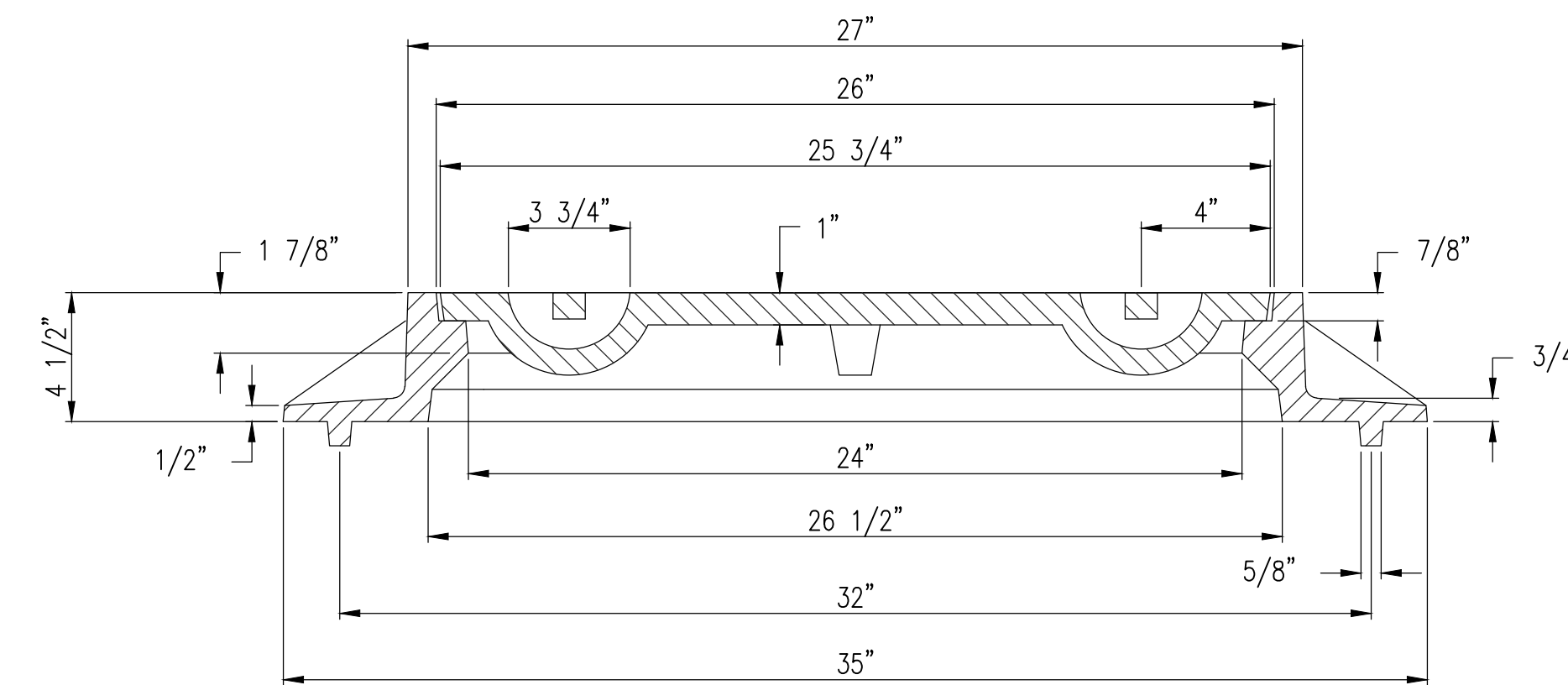
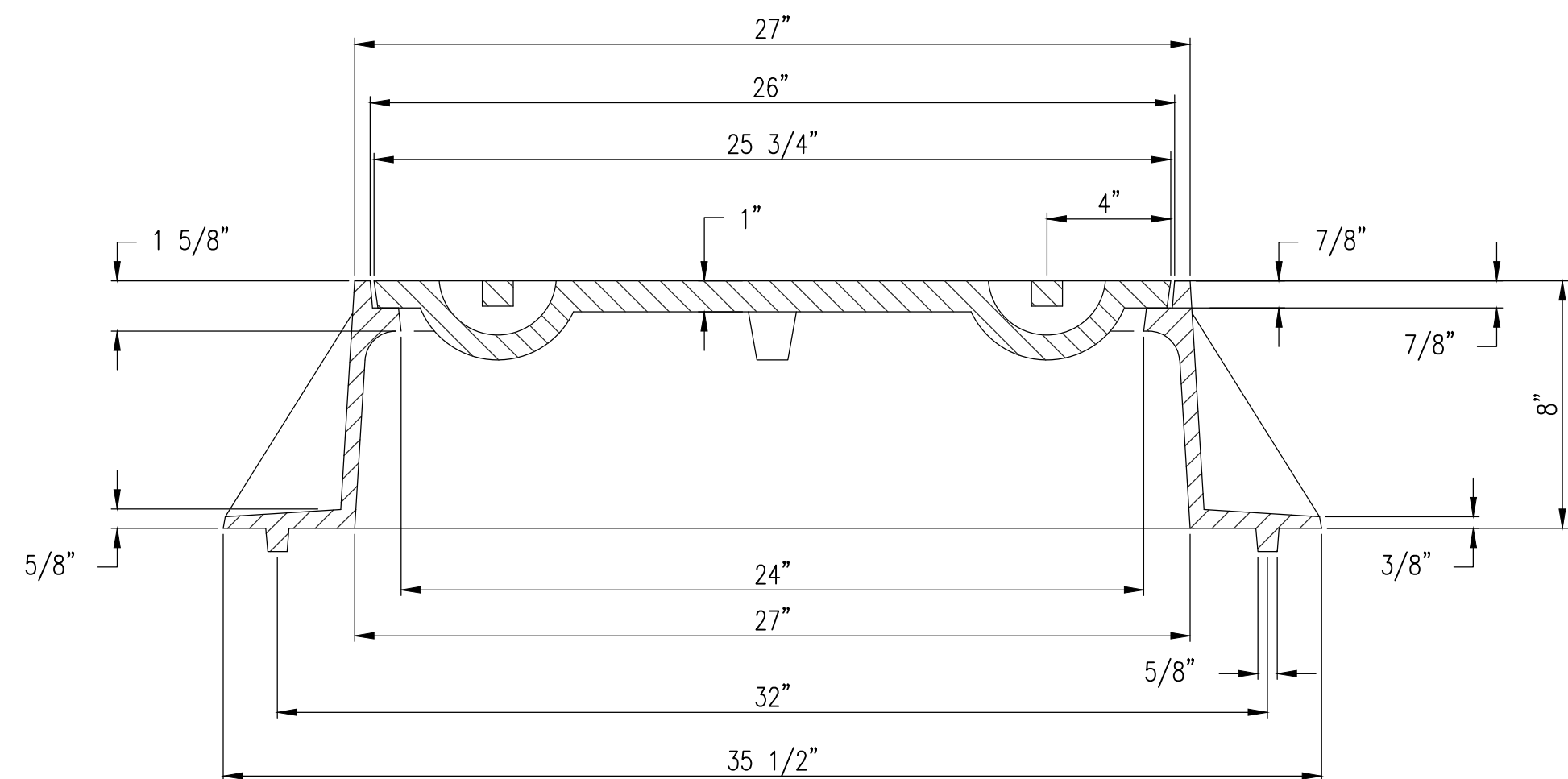
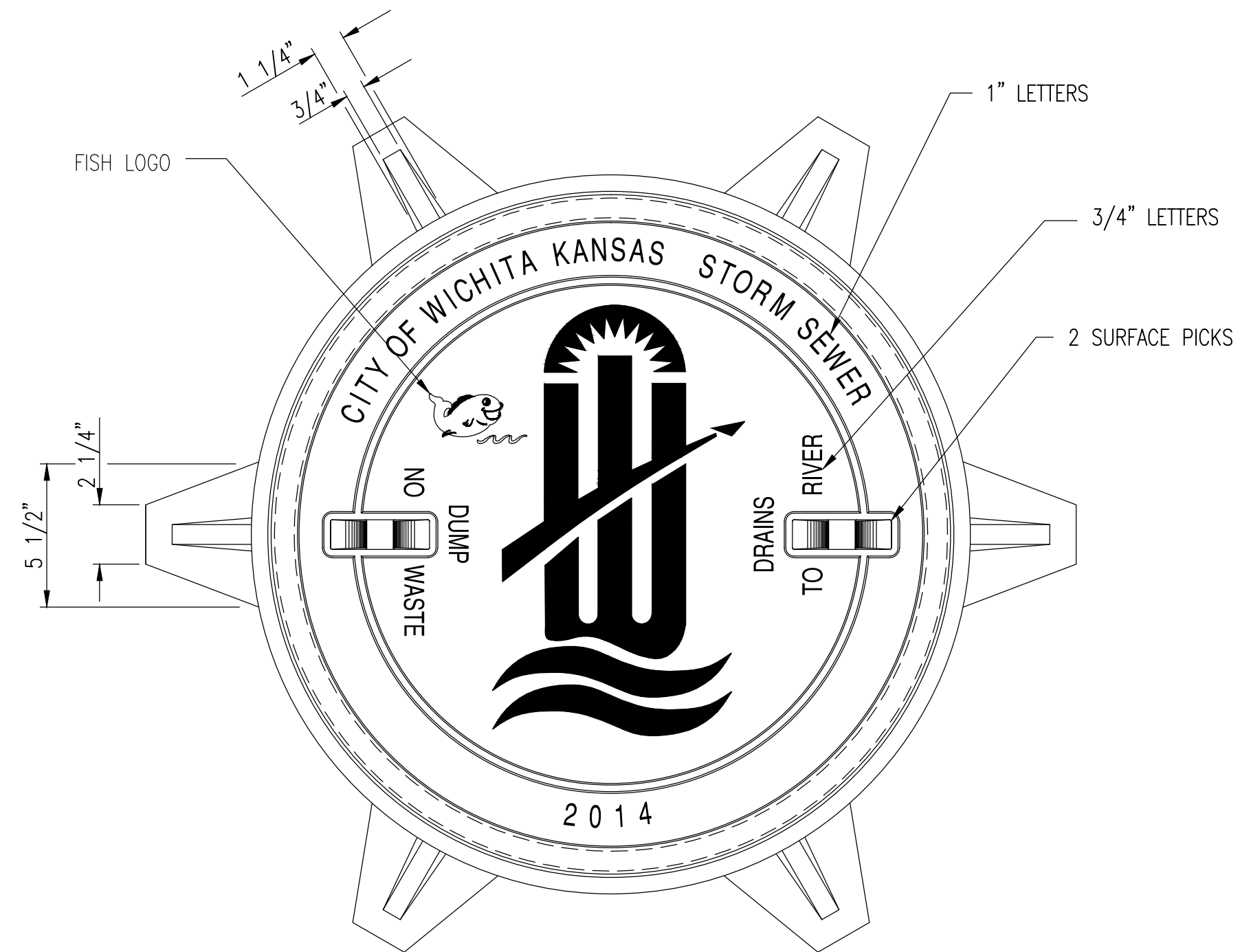
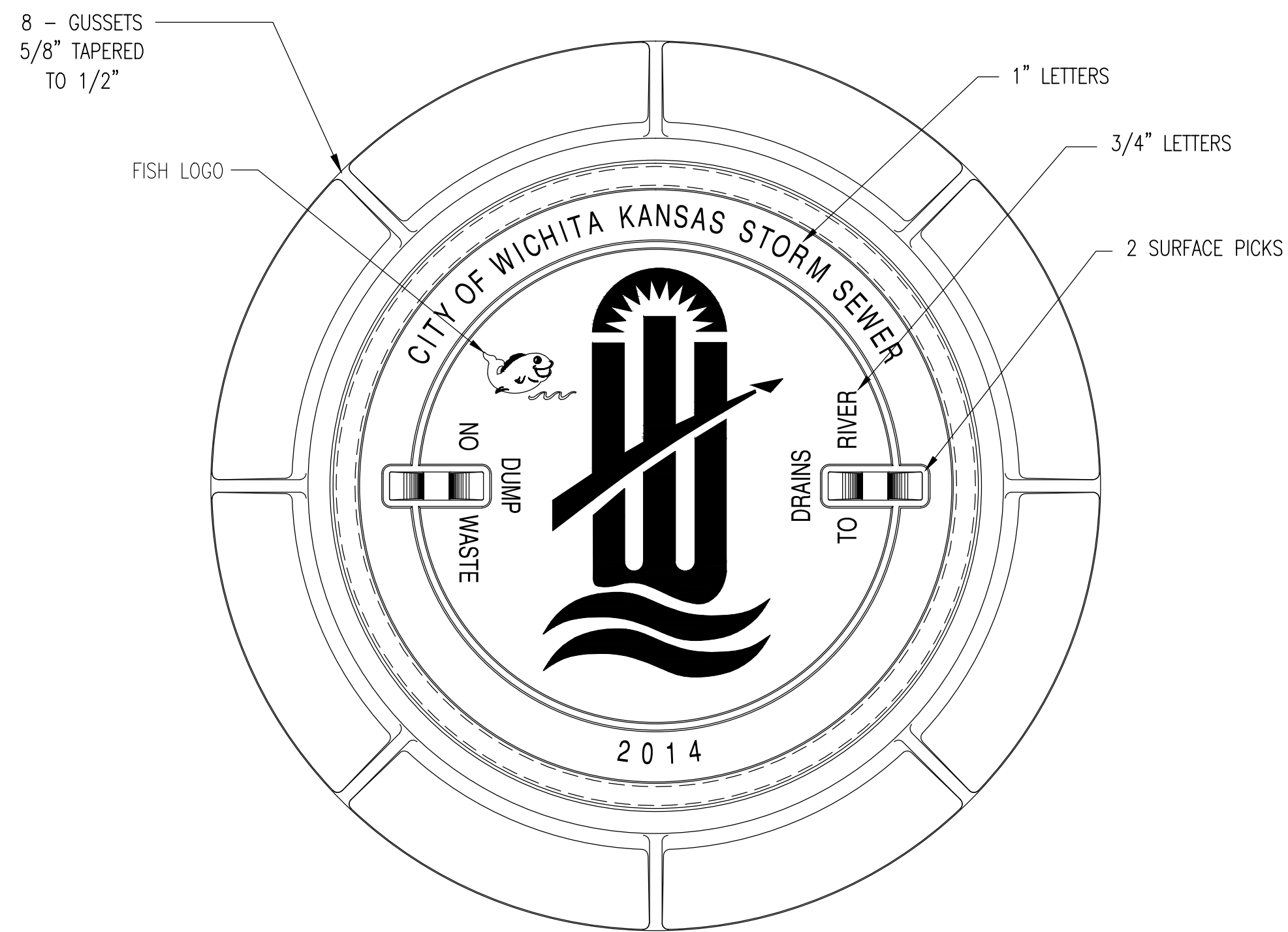
REVISED: MARCH 2015

CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

PRECAST CONCRETE
MANHOLE
(STORM SEWER)

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		SHEET 11 of 14

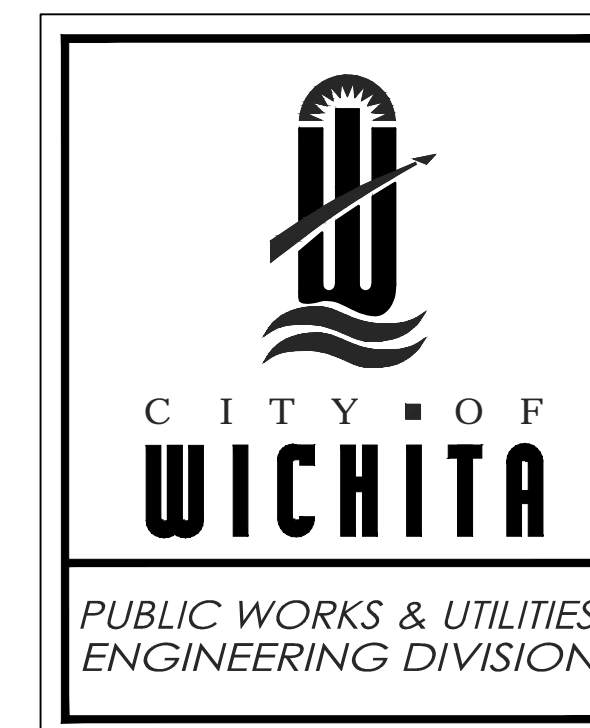


MANHOLE FRAME
DEETER #1261 OR EJIW #1936-Z1

- NOTE:
1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.
 2. COVER TO BE DEETER #1261 OR EJIW #1936A.

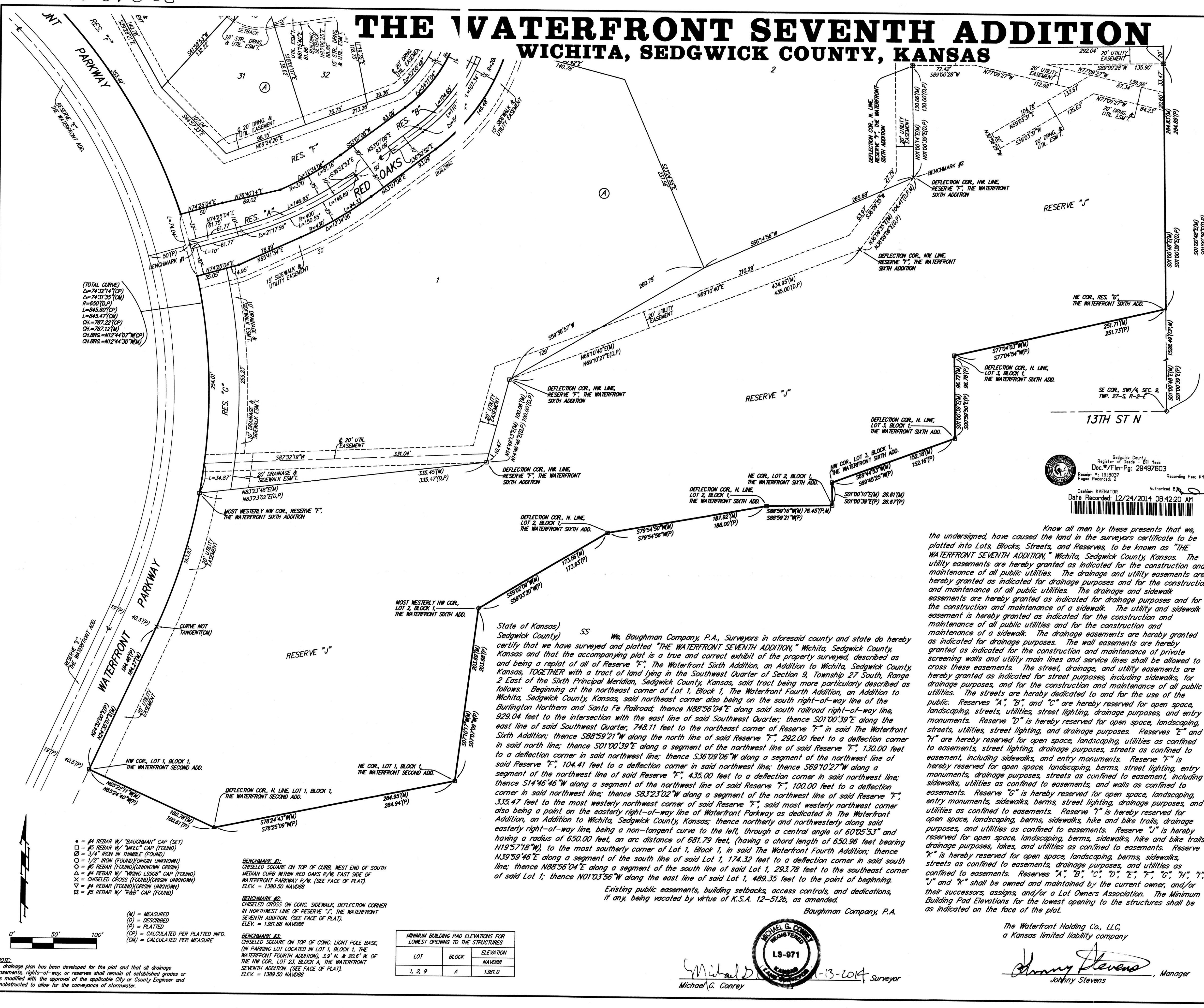
INLET FRAME
DEETER #2014 OR EJIW #1936-Z4

- NOTE:
1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACES.
 2. NOT TO BE USED UNDER PAVEMENT.
 3. COVER TO BE DEETER #1261 OR EJIW #1936A.



MANHOLE/INLET FRAME AND COVER (STORM SEWER)		
CITY ENGINEER Gary Janzen, P.E.		
PROJECT NUMBER	OCA NUMBER	DATE
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		DESIGN Staff
		DRAWN Staff
		SHEET 12 of 14

THE WATERFRONT SEVENTH ADDITION WICHITA, SEDGWICK COUNTY, KANSAS



This plat of "THE WATERFRONT SEVENTH ADDITION," Wichita, Sedgwick County, Kansas has been submitted to and approved by the Wichita-Sedgwick County Metropolitan Area Planning Commission, Wichita, Kansas.
Dated this 24th day of July, 2014.
Wichita-Sedgwick County Metropolitan Area Planning Commission

Matthew J. Godtsby, Chair
John L. Schlegel, Secretary

This plat approved and all dedications shown hereon accepted by the City Council of the City of Wichita, Kansas, this 9th day of December, 2014.

Carl Brewer, Mayor
Karen Sublett, City Clerk

Reviewed in accordance with K.S.A. 58-2005 on this 18th day of December, 2014.

Tricia L. Robello, L.S. #1246
Deputy County Surveyor
Sedgwick County, Kansas

Entered on transfer record this 23rd day of December, 2014.

Kelly B. Arnold, County Clerk

Sedgwick County
Register of Deeds - Bill Meek
Doc. # F1m - Pg: 29497603
Record #: 1818037
Pages Recorded: 2
Recording Fee: \$40.00
Date Recorded: 12/24/2014 08:42:20 AM
Authorized By: [Signature]
Deed: KVENATOR

Know all men by these presents that we, the undersigned, have caused the land in the surveyors certificate to be platted into Lots, Blocks, Streets, and Reserves, to be known as "THE WATERFRONT SEVENTH ADDITION," Wichita, Sedgwick County, Kansas. The utility easements are hereby granted as indicated for the construction and maintenance of all public utilities. The drainage and utility easements are hereby granted as indicated for drainage purposes and for the construction and maintenance of all public utilities. The drainage and sidewalk easements are hereby granted as indicated for the construction and maintenance of all public utilities and for the construction and maintenance of a sidewalk. The utility and sidewalk easement is hereby granted as indicated for the construction and maintenance of all public utilities and for the construction and maintenance of a sidewalk. The drainage easements are hereby granted as indicated for drainage purposes. The wall easements are hereby granted as indicated for the construction and maintenance of private screening walls and utility main lines and service lines shall be allowed to cross these easements. The street, drainage, and utility easements are hereby granted as indicated for street purposes, including sidewalks, for drainage purposes, and for the construction and maintenance of all public utilities. The streets are hereby dedicated to and for the use of the public. Reserves "A", "B", and "C" are hereby reserved for open space, landscaping, streets, utilities, street lighting, drainage purposes, and entry monuments. Reserve "D" is hereby reserved for open space, landscaping, streets, utilities, street lighting, and drainage purposes. Reserves "E" and "H" are hereby reserved for open space, landscaping, utilities as confined to easements, street lighting, drainage purposes, streets as confined to easement, including sidewalks, and entry monuments. Reserve "I" is hereby reserved for open space, landscaping, berms, street lighting, entry monuments, drainage purposes, streets as confined to easement, including sidewalks, utilities as confined to easements, and walls as confined to easements. Reserve "G" is hereby reserved for open space, landscaping, entry monuments, sidewalks, berms, street lighting, drainage purposes, and utilities as confined to easements. Reserve "J" is hereby reserved for open space, landscaping, berms, sidewalks, hike and bike trails, drainage purposes, and utilities as confined to easements. Reserve "K" is hereby reserved for open space, landscaping, berms, sidewalks, streets as confined to easements, drainage purposes, and utilities as confined to easements. Reserves "A", "B", "C", "D", "E", "F", "G", "H", "I", "J" and "K" shall be owned and maintained by the current owner, and/or their successors, assigns, and/or a Lot Owners Association. The Minimum Building Pad Elevations for the lowest opening to the structures shall be as indicated on the face of the plat.

State of Kansas) SS
Sedgwick County) We, Baughman Company, P.A., Surveyors in aforesaid county and state do hereby certify that we have surveyed and platted "THE WATERFRONT SEVENTH ADDITION," Wichita, Sedgwick County, Kansas and that the accompanying plat is a true and correct exhibit of the property surveyed, described as and being a replat of all of Reserve "F", The Waterfront Sixth Addition, an Addition to Wichita, Sedgwick County, Kansas, TOGETHER with a tract of land lying in the Southwest Quarter of Section 9, Township 27 South, Range 2 East of the Sixth Principal Meridian, Sedgwick County, Kansas, said tract being more particularly described as follows: Beginning at the northeast corner of Lot 1, Block 1, The Waterfront Fourth Addition, an Addition to Wichita, Sedgwick County, Kansas, said northeast corner also being on the south right-of-way line of the Burlington Northern and Santa Fe Railroad; thence N88°56'04"E along said south railroad right-of-way line, 929.04 feet to the intersection with the east line of said Southwest Quarter, thence S01°00'39"E along the east line of said Southwest Quarter, 748.11 feet to the northeast corner of Reserve "F" in said The Waterfront Sixth Addition; thence S88°59'21"W along the north line of said Reserve "F", 292.00 feet to a deflection corner in said north line; thence S01°00'39"E along a segment of the northwest line of said Reserve "F", 130.00 feet to a deflection corner in said northwest line; thence S36°09'06"W along a segment of the northwest line of said Reserve "F", 104.41 feet to a deflection corner in said northwest line; thence S69°10'27"W along a segment of the northwest line of said Reserve "F", 435.00 feet to a deflection corner in said northwest line; thence S14°46'46"W along a segment of the northwest line of said Reserve "F", 100.00 feet to a deflection corner in said northwest line; thence S83°23'02"W along a segment of the northwest line of said Reserve "F", 333.47 feet to the most westerly northwest corner of said Reserve "F", said most westerly northwest corner also being a point on the easterly right-of-way line of Waterfront Parkway as dedicated in The Waterfront Addition, an Addition to Wichita, Sedgwick County, Kansas; thence northerly and northwesterly along said easterly right-of-way line, being a non-tangent curve to the left, through a central angle of 60°05'53" and having a radius of 650.00 feet, an arc distance of 681.79 feet, (having a chord length of 605.96 feet bearing N19°57'18"W), to the most southerly corner of Lot 1, Block 1, in said The Waterfront Fourth Addition; thence N39°59'46"E along a segment of the south line of said Lot 1, 174.32 feet to a deflection corner in said south line; thence N88°56'04"E along a segment of the south line of said Lot 1, 293.78 feet to the southeast corner of said Lot 1; thence N01°03'56"W along the east line of said Lot 1, 489.35 feet to the point of beginning.
Existing public easements, building setbacks, access controls, and dedications, if any, being vacated by virtue of K.S.A. 12-512b, as amended.
Baughman Company, P.A.

MINIMUM BUILDING PAD ELEVATIONS FOR LOWEST OPENING TO THE STRUCTURES

LOT	BLOCK	ELEVATION
1, 2, 9	A	1,381.0

Michael G. Conrey, Surveyor
LS-971
12-13-2014

Johnny Stevens, Manager
The Waterfront Holding Co., LLC,
a Kansas limited liability company

State of Kansas) SS
Sedgwick County) This is to certify that this plat has been filed for record in the office of the Register of Deeds, this 24th day of December, 2014 at 2:42 o'clock P.M. and is duly recorded.

Bill Meek, Register of Deeds
Tonya Buckingham, Deputy

We, the undersigned holders of a mortgage on the above described property, do hereby consent to this plat of "THE WATERFRONT SEVENTH ADDITION," Wichita, Sedgwick County, Kansas.
Collin Stieben, EVP
COLLIN STIEBEN (Title)

State of Kansas) SS
Sedgwick County) The foregoing instrument acknowledged before me, this 14th day of November, 2014, by **Collin Stieben**, EVP of Commerce Bank, on behalf of the bank.

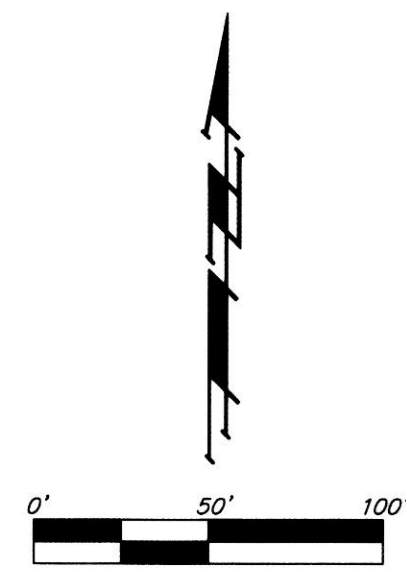
Chad Hanson, Notary Public
My App't. Exp. 9-16-15

State of Kansas) SS
Sedgwick County) The foregoing instrument acknowledged before me, this 14th day of November, 2014, by **Johnny Stevens**, Manager of The Waterfront Holding Co., LLC, a Kansas limited liability company, on behalf of the limited liability company.

Sandi M. Stevens, Notary Public
My App't. Exp. 9-20-2018

Baughman Company, P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE
E:\PROJECTS\Waterfront Seventh Addition\Waterfront 7th.DWG.RKR

THE WATERFRONT SEVENTH ADDITION WICHITA, SEDGWICK COUNTY, KANSAS



- #4 REBAR W/ "DAUGHMAN" CAP (SET)
- #5 REBAR W/ "MKEC" CAP (FOUND)
- 3/4" IRON IN THIMBLE (FOUND)
- 1/2" IRON (FOUND)(ORIGIN UNKNOWN)
- ◇ #5 REBAR (FOUND)(ORIGIN UNKNOWN)
- △ #4 REBAR W/ "WING LSOB" CAP (FOUND)
- × CHISELED CROSS (FOUND)(ORIGIN UNKNOWN)
- ▽ #4 REBAR (FOUND)(ORIGIN UNKNOWN)
- ⊠ #5 REBAR W/ "R&B" CAP (FOUND)

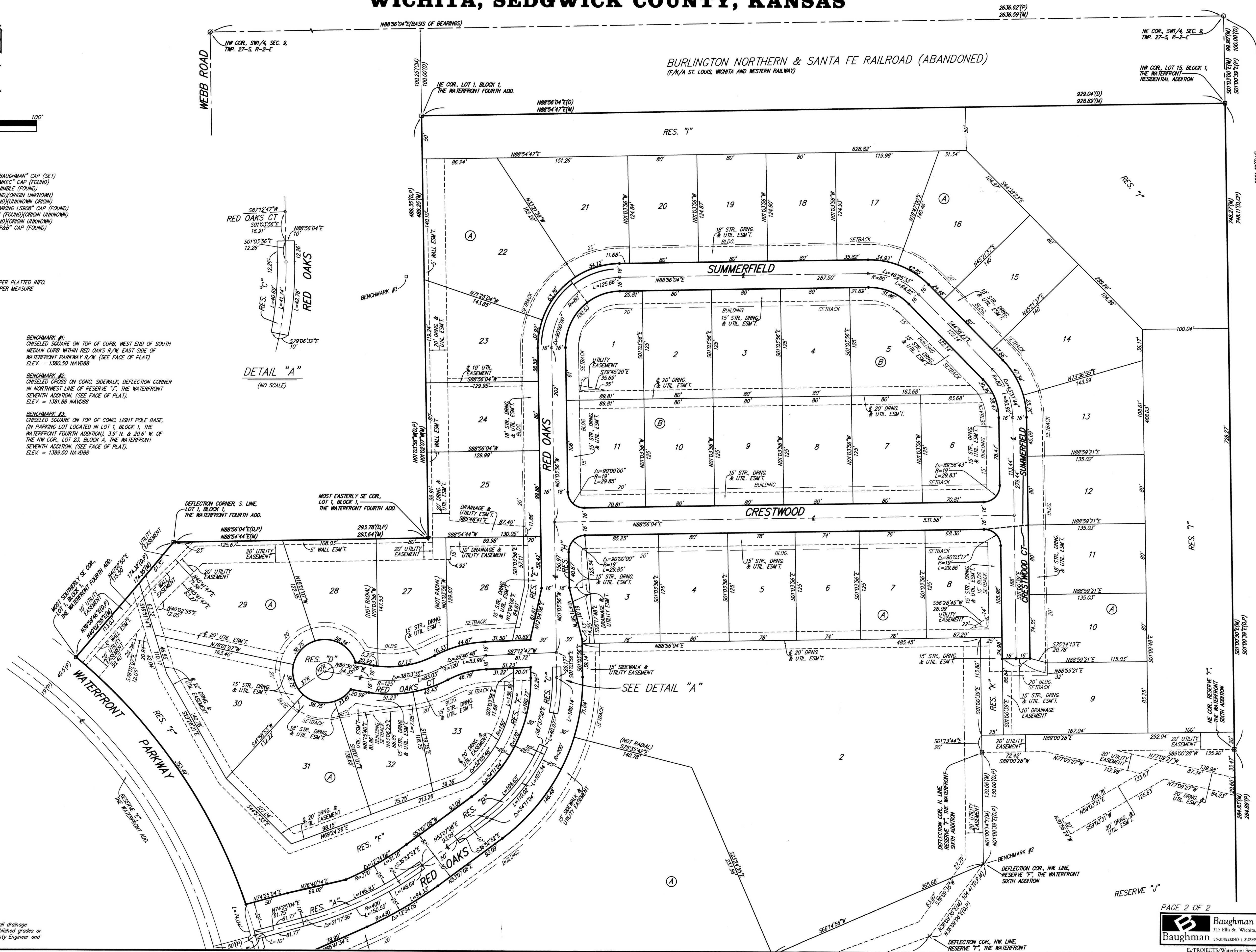
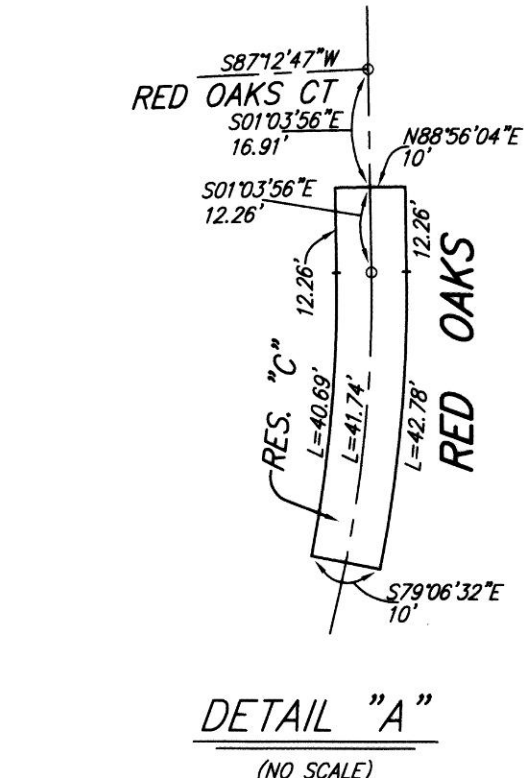
(M) = MEASURED
(D) = DESCRIBED
(P) = PLATTED
(CP) = CALCULATED PER PLATTED INFO.
(CM) = CALCULATED PER MEASURE

BENCHMARK #1:
CHISELED SQUARE ON TOP OF CURB, WEST END OF SOUTH MEDIAN CURB WITHIN RED OAKS R/W, EAST SIDE OF WATERFRONT PARKWAY R/W. (SEE FACE OF PLAT).
ELEV. = 1380.50 NAVD88

BENCHMARK #2:
CHISELED CROSS ON CONC. SIDEWALK, DEFLECTION CORNER IN NORTHWEST LINE OF RESERVE "J", THE WATERFRONT SEVENTH ADDITION. (SEE FACE OF PLAT).
ELEV. = 1381.88 NAVD88

BENCHMARK #3:
CHISELED SQUARE ON TOP OF CONC. LIGHT POLE BASE, (IN PARKING LOT LOCATED IN LOT 1, BLOCK 1, THE WATERFRONT FOURTH ADDITION), 33' N. & 22.6' W. OF THE NW COR., LOT 23, BLOCK A, THE WATERFRONT SEVENTH ADDITION. (SEE FACE OF PLAT).
ELEV. = 1389.50 NAVD88

MINIMUM BUILDING PAD ELEVATIONS FOR LOWEST OPENING TO THE STRUCTURES		
LOT	BLOCK	ELEVATION NAVD88
1, 2, 9	A	1381.0



NOTE:
A drainage plan has been developed for the plot and that all drainage easements, rights-of-way, or reserves shall remain at established grades or as modified with the approval of the applicable City or County Engineer and unobstructed to allow for the conveyance of stormwater.