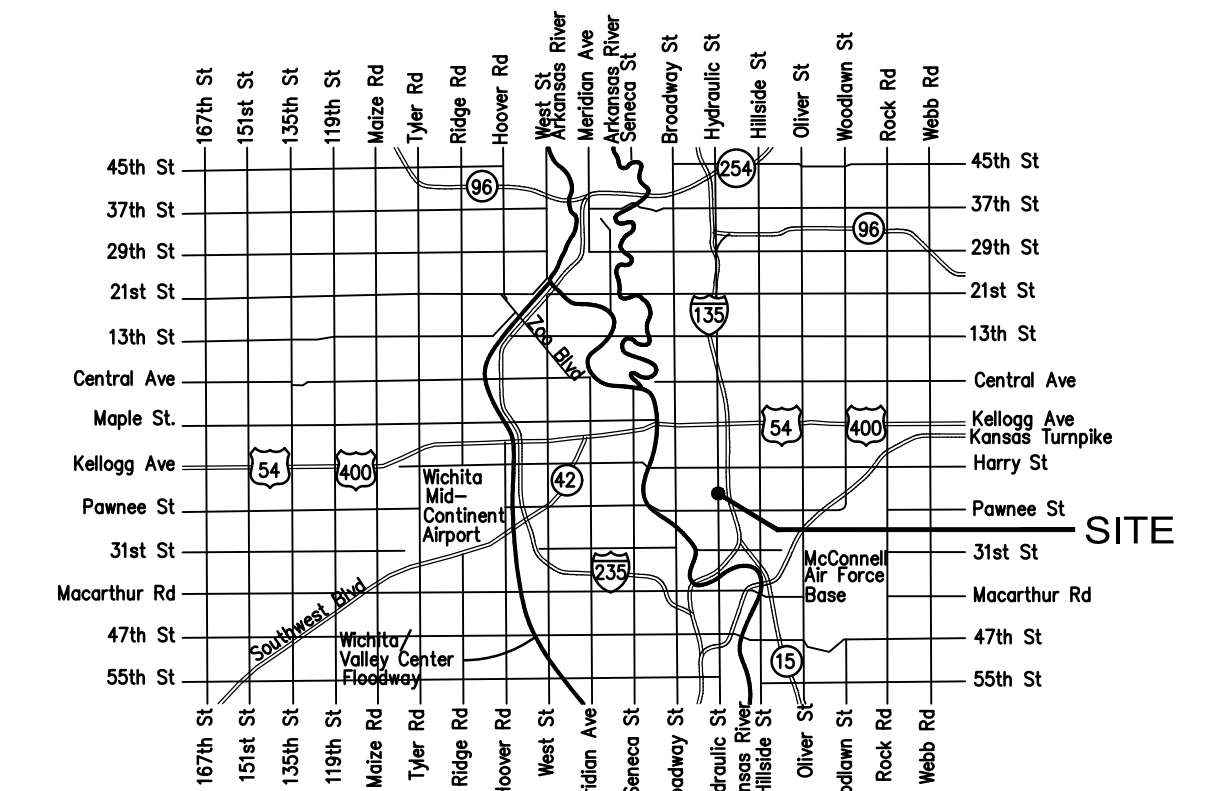


Sanitary Sewer Improvements in **HYDRAULIC & SOUTHEAST BLVD.** CITY OF WICHITA, KANSAS

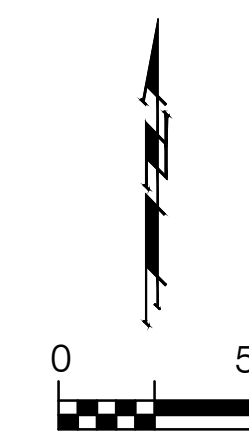
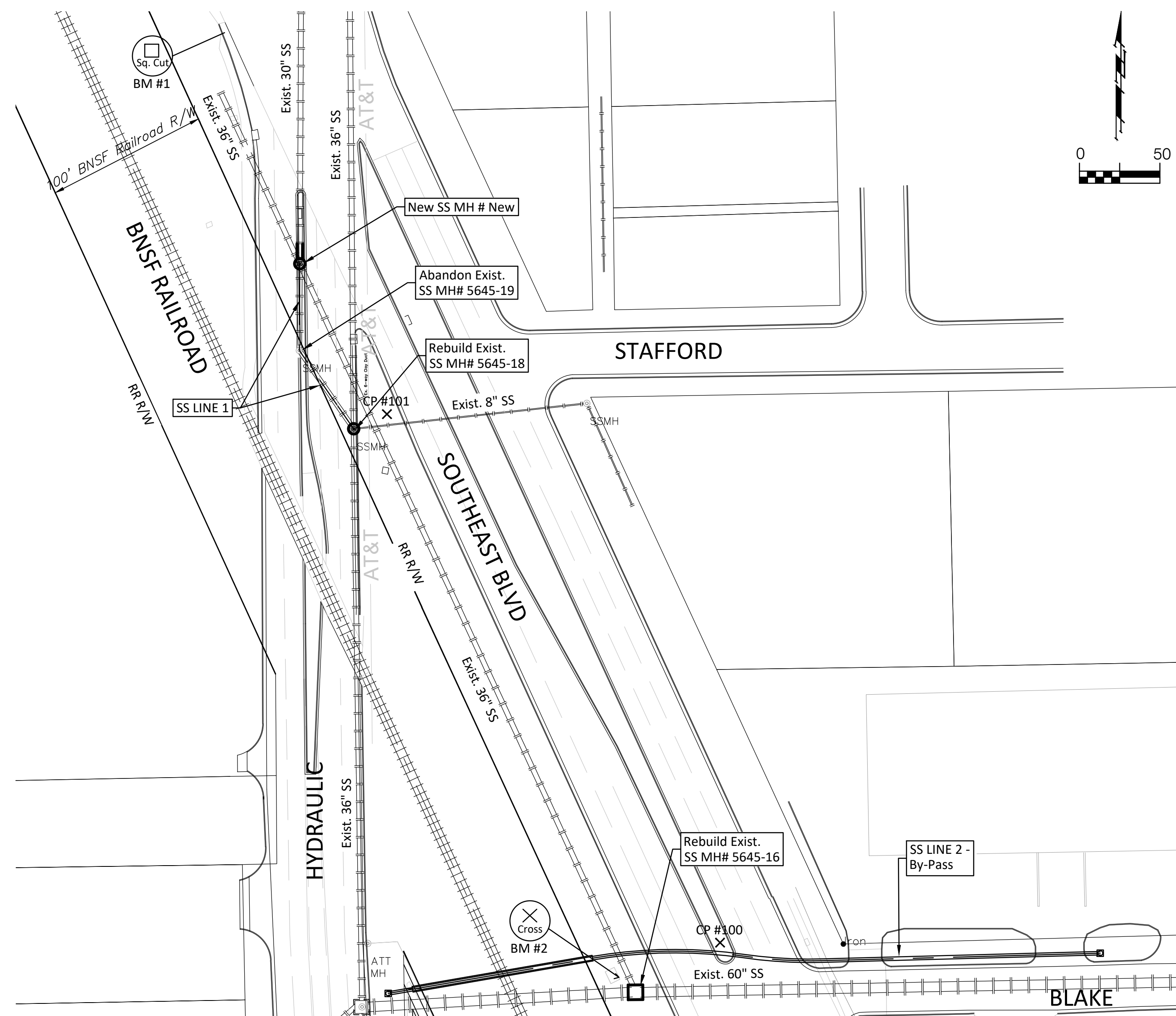
Gary Janzen, P.E. City Engineer
Project Number
468-85276
OCA Number
622526

NOTE: Attached waterline as-built drawings from inspector.

Dondlinger - Contractor
J. Terhune - City of Wichita, Field Project Engineer
T. Jaso - City of Wichita, Inspector
As-built
Release Date: 3/15/2024
Completion Date:
pdf: aprosas 12/4/2024



VICINITY MAP



CONTROL POINTS

POINT TABLE				
POINT #	RAW DESCRIPTION	NORTHING	EASTING	ELEVATION
98	BM #1	1673546.0167	1654713.5198	1286.43
99	BM #2	1672957.5835	1654959.0496	1285.59
100	cp topo	1672980.2174	1655021.4791	1287.51
101	cp topo	1673308.8047	1654814.3521	1286.57

SHEET INDEX

- 1 Title Sheet
- 2 General Notes
- 3 Sanitary Sewer Line 1 Plan & Profile
- 4A Sanitary Line 2 Plan & Profile
- 4B Sanitary Line 2 Details
- 5 Misc. Details
- 6-7 Sanitary Sewer Manhole Details
- 8 Sewage Flow Control Plan
- 9-12 Traffic Control Plans
- 13-15 Traffic Control Details
- 16 Traffic Signal Wiring Plan
- 17 Traffic Signal Wiring Detail
- 18 Erosion Control Plan
- 19-23 Erosion Control BMP Details

*Blake MH info:
MH was not an Armour MH. It was lined with Raven by VMC.
It was removed down to vault level.
A new lid was cast (structure was not square shape)
A new stack and flat top was installed - all sprayed with Raven.*

BENCHMARKS

BM #1 - Chiseled "L" in the Top of Curb Located at the Southwest Corner of the Intersection of Hydraulic & Southeast Blvd., 6' East of Fire Hydrant.
Elev. = 1286.43 (NAVD 88)

BM #2 - Chiseled "X" on the Concrete Pad w/ a Vent Pipe Located 500' Southeast of the Intersection of Hydraulic & Southeast Blvd. on the Southwest Side of Southeast Blvd.
Elev. = 1285.59 (NAVD 88)



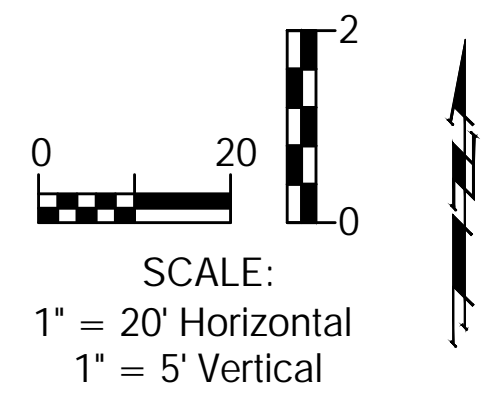
Jan. 23, 2023

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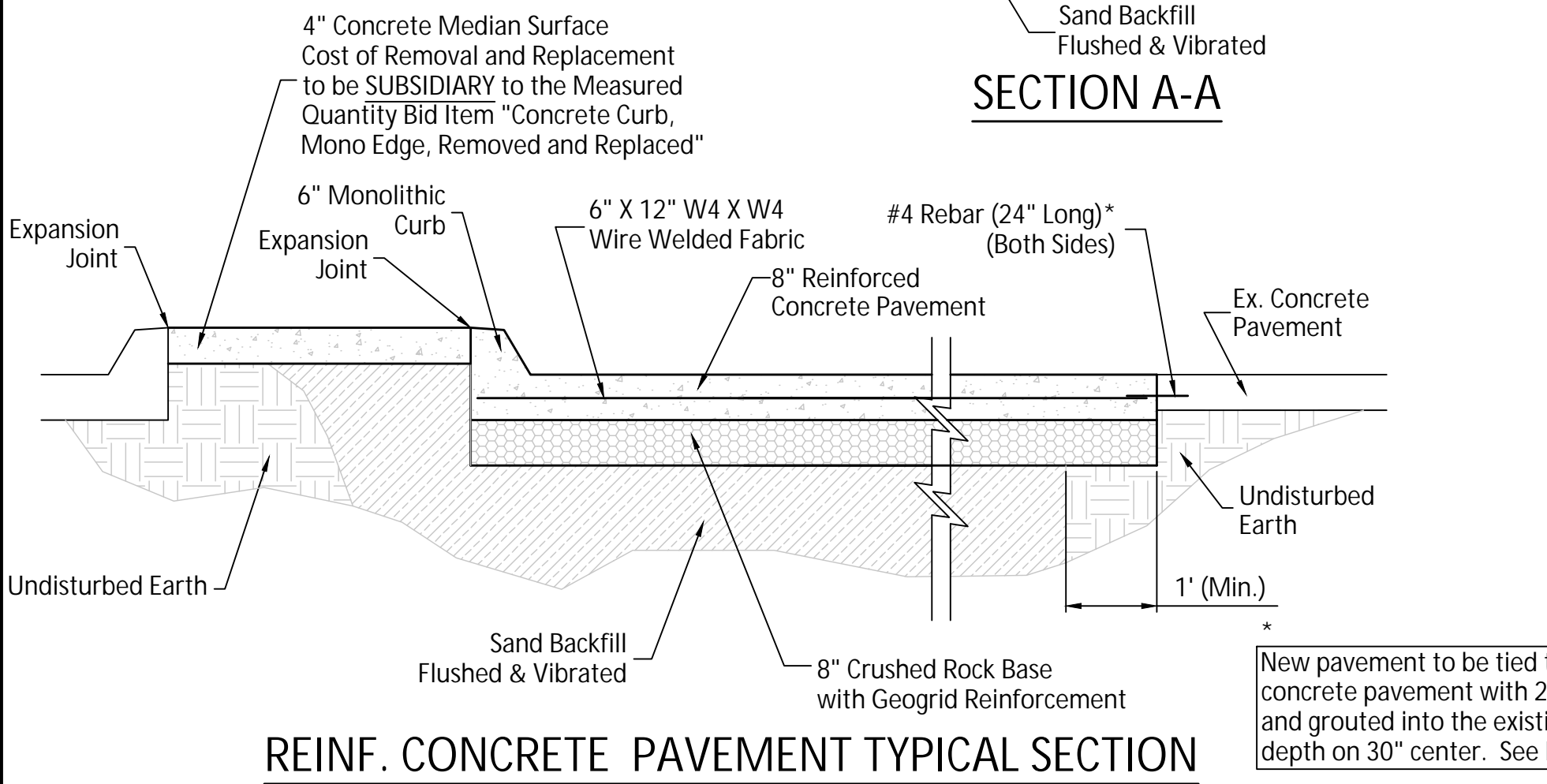
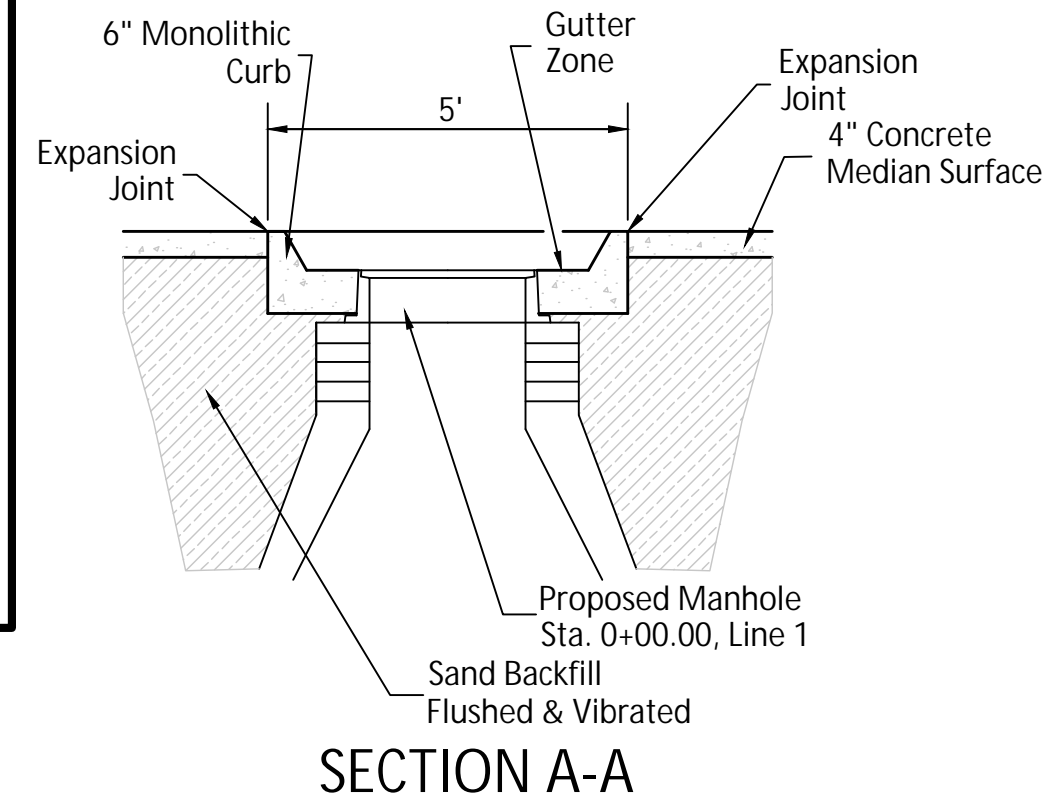
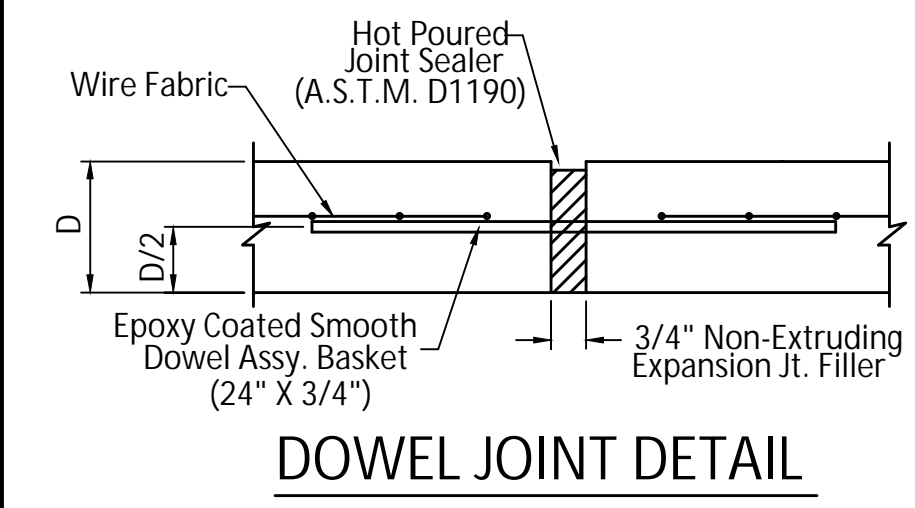
BENCHMARKS

BM #1 - Chiseled "C" in the Top of Curb Located at the Southwest Corner of the Intersection of Hydraulic & Southeast Blvd., 6' East of Fire Hydrant.
Elev. = 1286.43 (NAVD 88)

BM #2 - Chiseled "X" on the Concrete Pad w/ a Vent Pipe Located 500' Southeast of the Intersection of Hydraulic & Southeast Blvd. on the Southwest Side of Southeast Blvd.
Elev. = 1285.59 (NAVD 88)



New 8" MJ Valve - 3.5' top of pipe
8'E & 9'W of c/l of southbound Hydraulic & southbound SE Blvd.
OR
10'N of bullnose of median of N/S lanes on Hydraulic.
Anchored with deadman & angel iron with all threads.

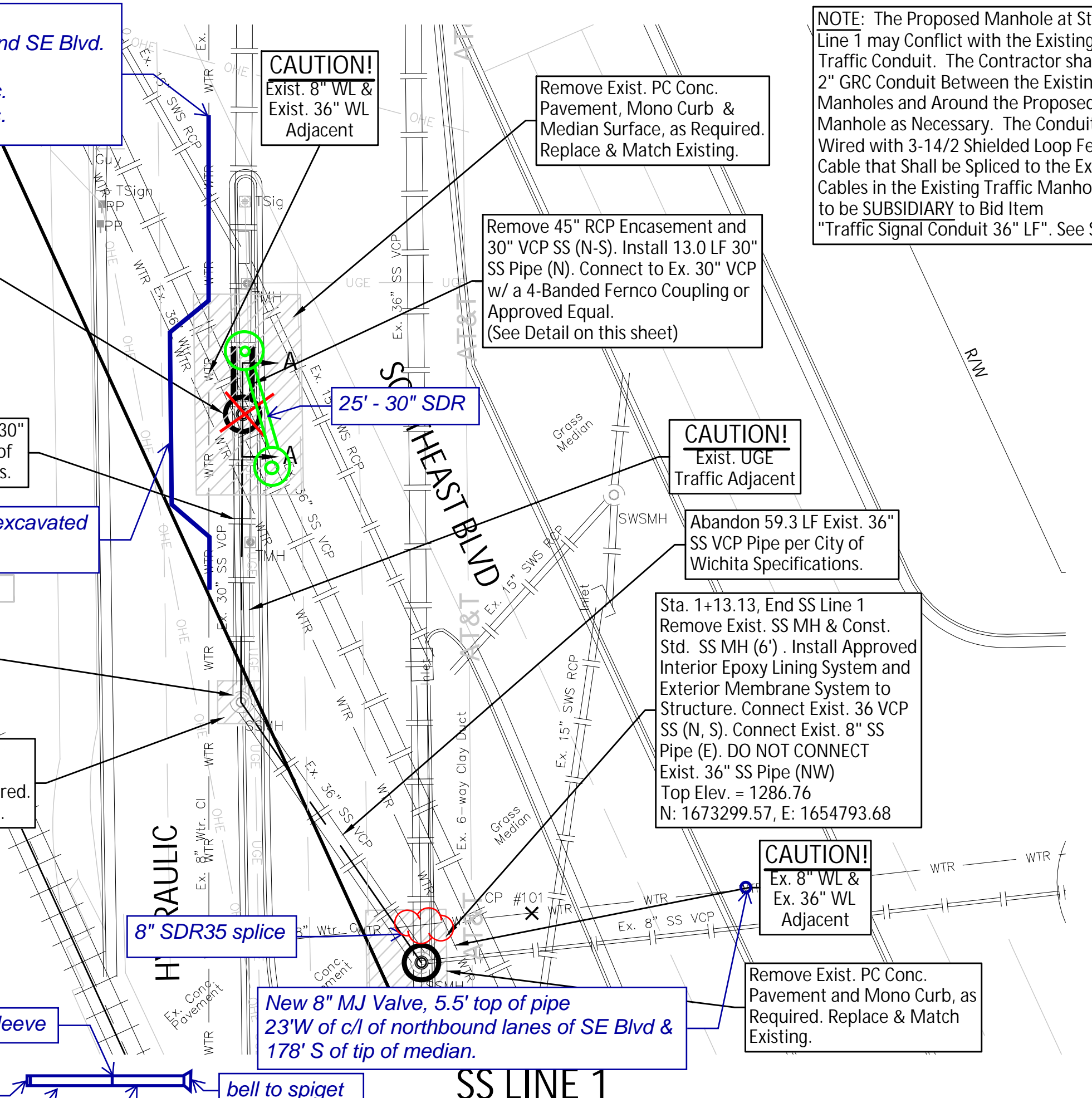


Sta. 0+00.00, Begin SS Line 1
Const. "Doghouse Style" MH (6' Dia.) with "Outside Drop" (for 30" Dia. SS Pipe). Install Approved Interior Epoxy Lining System and Exterior Membrane System to Structure. Connect Exist. 30" SS (N) and Exist. 36" SS (NW, SE). DO NOT CONNECT Exist. 30" SS Pipe (S). See Detail on this Sheet.
Top Elev. = 1286.05
N: 1673402.16, E: 1654762.68

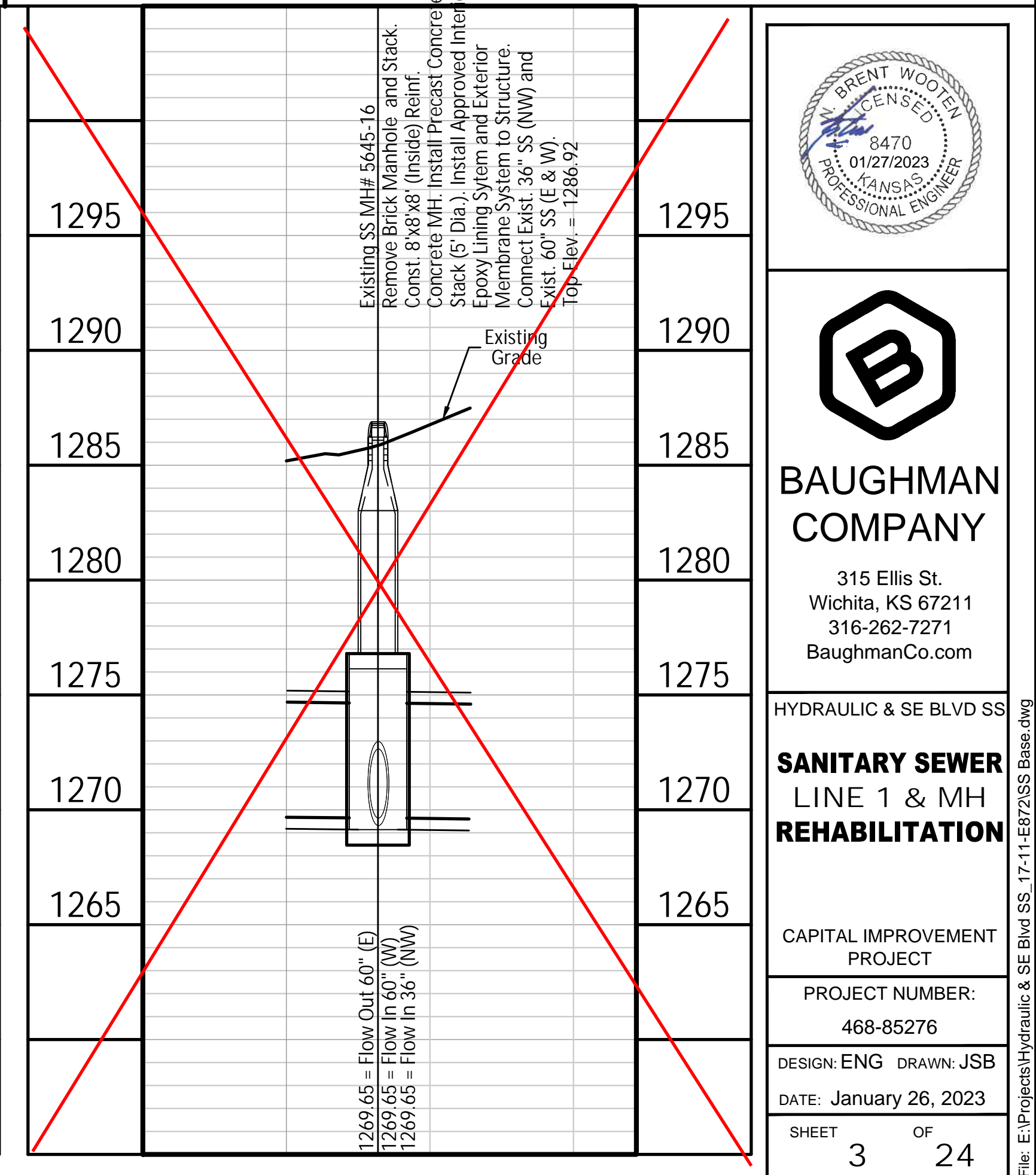
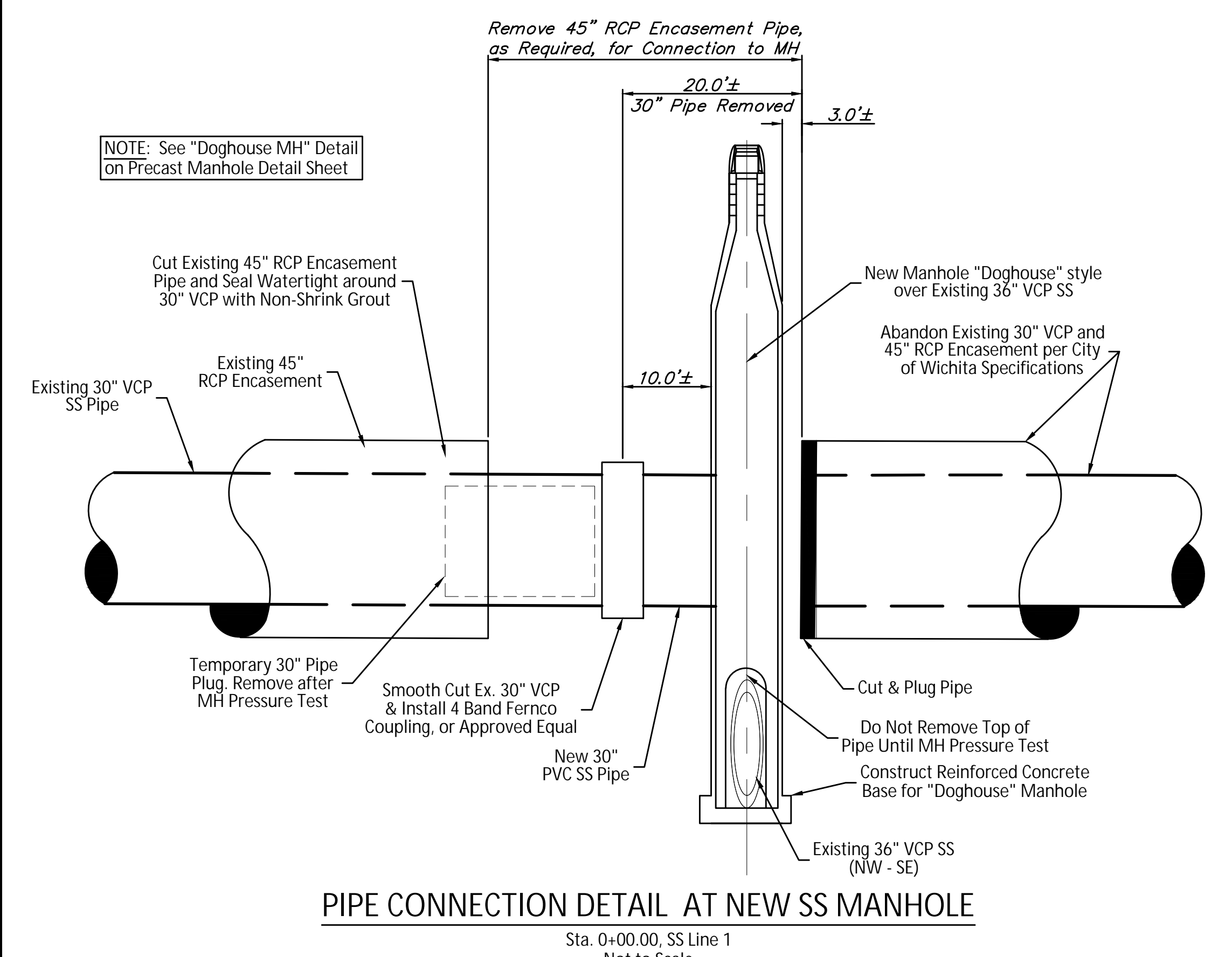
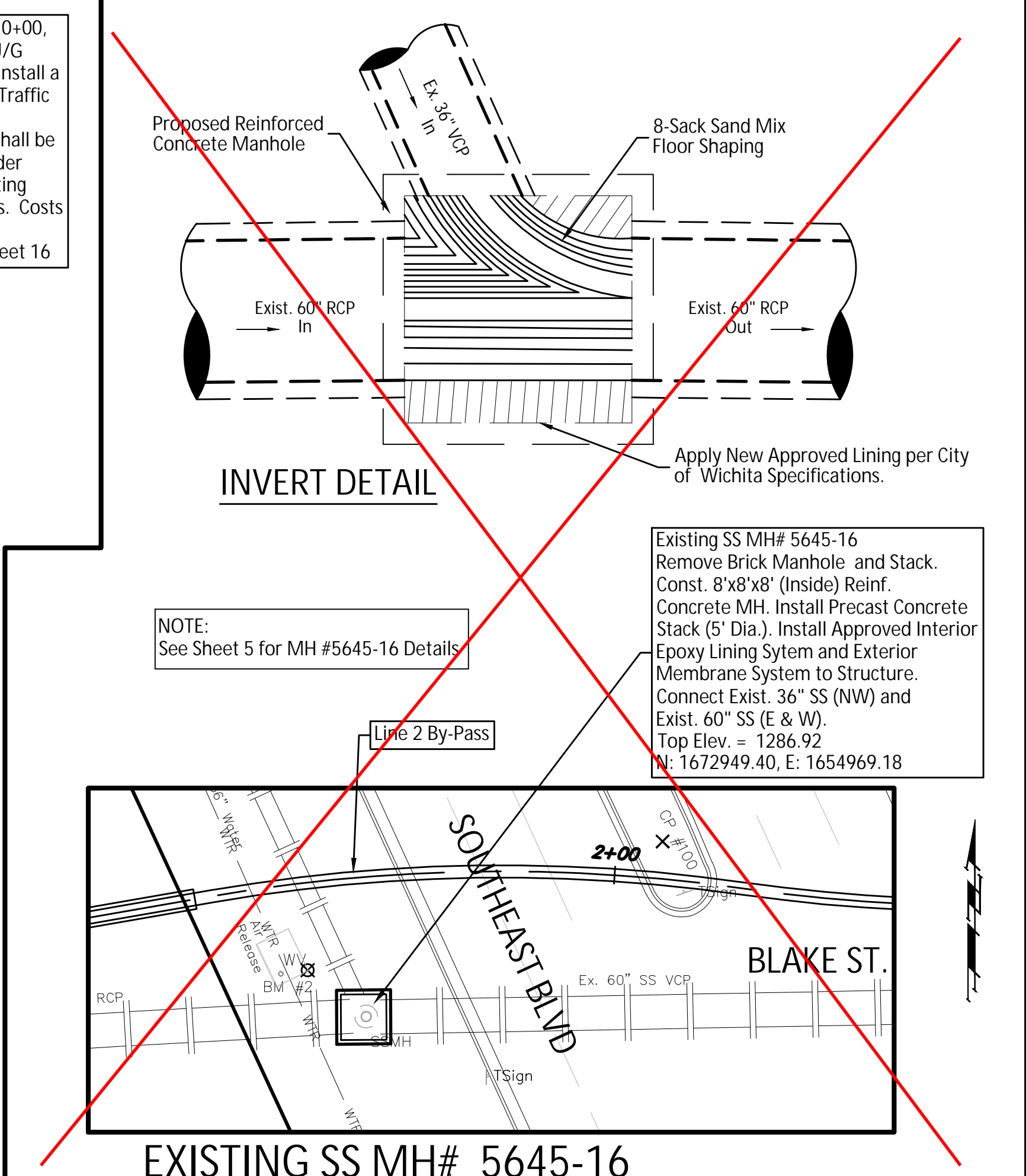
8" Waterline was rerouted around excavated area for mh installation.

Sta. 0+53.86, SS Line 1
Abandon Exist. SS MH per City of Wichita Specifications
Top Elev. = 1287.16
N: 1673348.30, E: 1654759.94

Remove Exist. PC Conc. Pavement, Mono Curb & Median Surface, as Required. Replace & Match Existing.



1295	1295	1295	1295
1290	1290	1290	1290
1285	1285	1285	1285
1280	1280	1280	1280
1275	1275	1275	1275
1270	1270	1270	1270
1265	1265	1265	1265



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SANITARY SEWER LINE 1 & MH REHABILITATION

CAPITAL IMPROVEMENT PROJECT
PROJECT NUMBER: 468-85276
DESIGN: ENG DRAWN: JSB
DATE: JANUARY 26, 2023
SHEET 3 OF 24



EX. 8" C.I.

NEW VALVE INFO

8" M.J. VALVE, 3.5' T.O.P., 8' E. C/L S. BOUND HYDRAULIC
9' W. C/L S. BOUND S.E. BLVD.

10' N. BULLNOSE OF MEDIAN OF N/S LANES HYDRAULIC
ANCHORED WITH "DEADMAN" AND ANGLE IRON W/ ALL THREAD

STAFFORD

EX. 8" AC

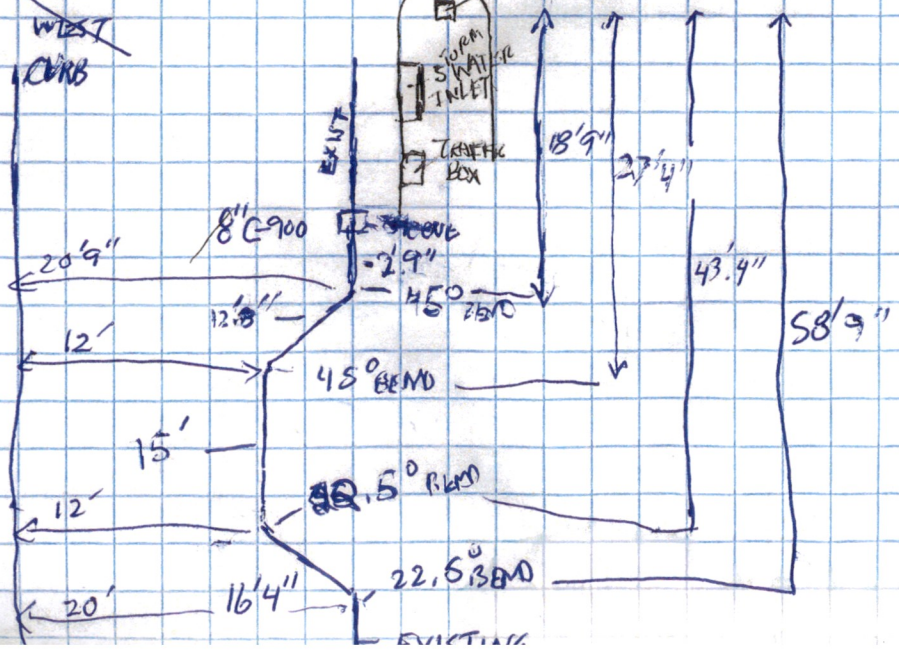
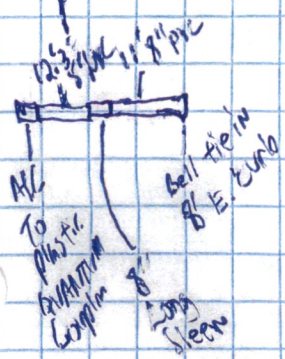
NEW VALVE INFO

8" N/S VALVE 5.5' T.O.P., 10' W. E. CURB OF MEDIAN,
23' W. C/L N. BOUND LANES OF S.E. BLVD
178' SOUTH OF TIP OF MEDIAN

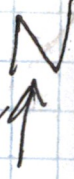
SOUTHEAST BLVD

HYDRAULIC

TRAFFIC LIGHT SIGNAL POLE



WATERLINE AS-BUILT FOR 8" M.J. VALVE IN MEDIAN OF S.E. BLVD. BETWEEN N/S TRAFFIC @ STAFFORD STREET



HYDRAULIC

EX 8" C.I. WATER

ADDED
8" M.J. VALVE
3.5' T.O.P.
8' E.C/L S. BOUND Hydraulic
9' W. C/L S. BOUND S.E. BLVD.

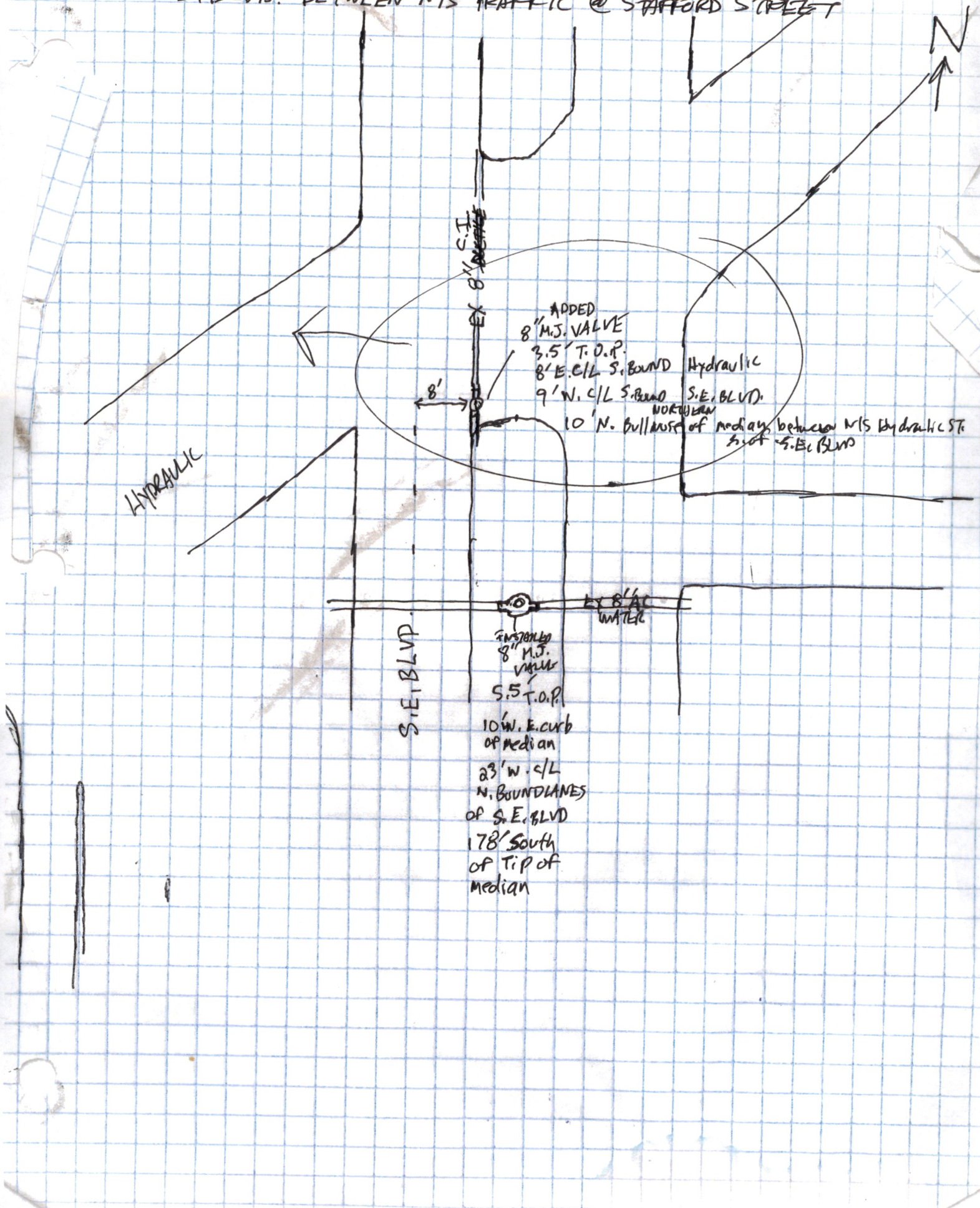
10' N. Bullnose of median between N/S Hydraulic ST. S. of S.E. Blvd

8'

S.E. BLVD.

EX 8" C.I. WATER

INSTALLED
8" M.J. VALVE
5.5' T.O.P.
10' W. E. curb
of median
23' W. C/L
N. BOUND LINES
of S.E. BLVD
178' South
of Tip of
median



BENCHMARKS

BM #1 - Chiseled "C" in the Top of Curb Located at the Southwest Corner of the Intersection of Hydraulic & Southeast Blvd., 6' East of Fire Hydrant.
Elev. = 1286.43 (NAVD 88)

BM #2 - Chiseled "X" on the Concrete Pad w/ a Vent Pipe Located 500' Southeast of the Intersection of Hydraulic & Southeast Blvd. on the Southwest Side of Southeast Blvd.
Elev. = 1285.59 (NAVD 88)

Sta. 0+15.40 to Sta. 1+28.93
Install 113.53 L.F. 36" O.D. Steel Casing Pipe (0.531" Min. Wall Thickness), Per City of Wichita Standard Specifications - Section 802.3 Steel Casing by Jack & Bore Extend Casing Pipe 5' Min. past RR ROW.

Sta. 0+00.00, Begin SS Line 2
Construct West Connection Structure
Top Elev. = 1285.49
See Detail, Sheet 5.
N: 1672948.63, E: 1654815.16

Exist. SS MH # 5645-17

CAUTION!
Existing U/G AT&T Fiber Optic Crossing

Install 128.93 L.F. 26" HDPE Pipe (DR 32.5)

CAUTION!
Existing 36" Water 36" SS Crossings

Sta. 2+73.21, SS Line 2
P.T. of 200' Radius Curve
N: 1672969.05, E: 1655085.96

Sta. 2+22.73, SS Line 2
P.R.C. of 200' Radius Curve (Lt.)
N: 1672971.98, E: 1655035.62

CAUTION!
Existing 2" Gas O/H Elec Crossings

Sta. 4+45.00, End SS Line 2
Construct East Connection Structure
Top Elev. = 1286.46
See Detail, Sheet 5.
N: 1672973.62, E: 1655257.69

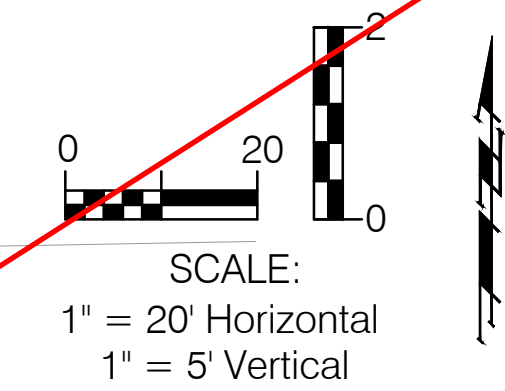
Sta. 1+28.93, SS Line 2
P.C. of 200' Radius Curve (Rt.)
N: 1672970.58, E: 1654942.21

Install 316.07 L.F. 26" HDPE Pipe (DR 32.5) by Jack & Bore for Temporary SS By-Pass.

CAUTION!
Existing U/G AT&T Crossings

Exist. SS MH # 5645-16 (See Sheets 3, 5)

Note:
See Sheet 4B for Sanitary Sewer Line 2 Details.



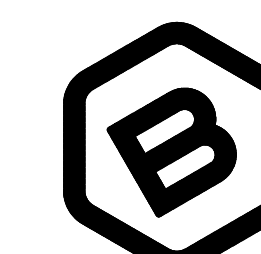
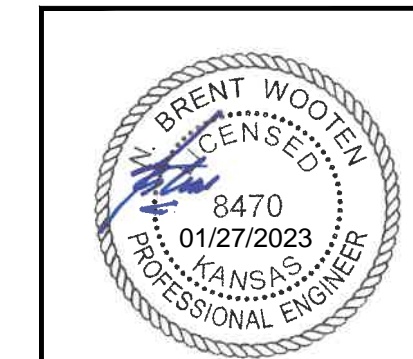
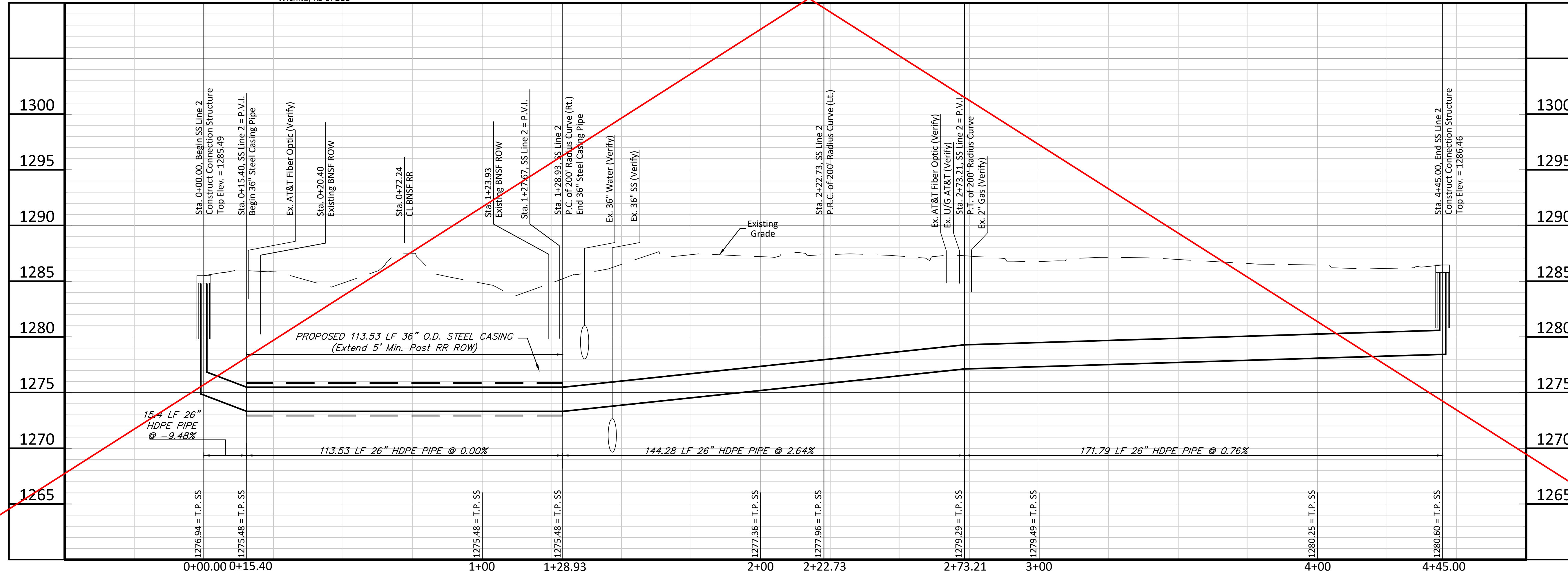
HYDRAULIC

PIZZA HUT
PAWNEE/HYDRAULIC
ADDITION
1
Pizza Hut
1708 E. Pawnee Avenue
Wichita, KS 67211

SS LINE 2 BY-PASS

BLAKE STREET

BOMHOFF ADDITION
Block A
The Floor Project
1900 E. Pawnee Avenue
Wichita, KS 67211



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HYDRAULIC & SE BLVD SS

**SANITARY SEWER
LINE 2
PLAN/PROFILE**

CAPITAL IMPROVEMENT
PROJECT

PROJECT NUMBER:
468-85276

DESIGN: ENG DRAWN: JSB

DATE: January 26, 2023

SHEET
4A OF **24**

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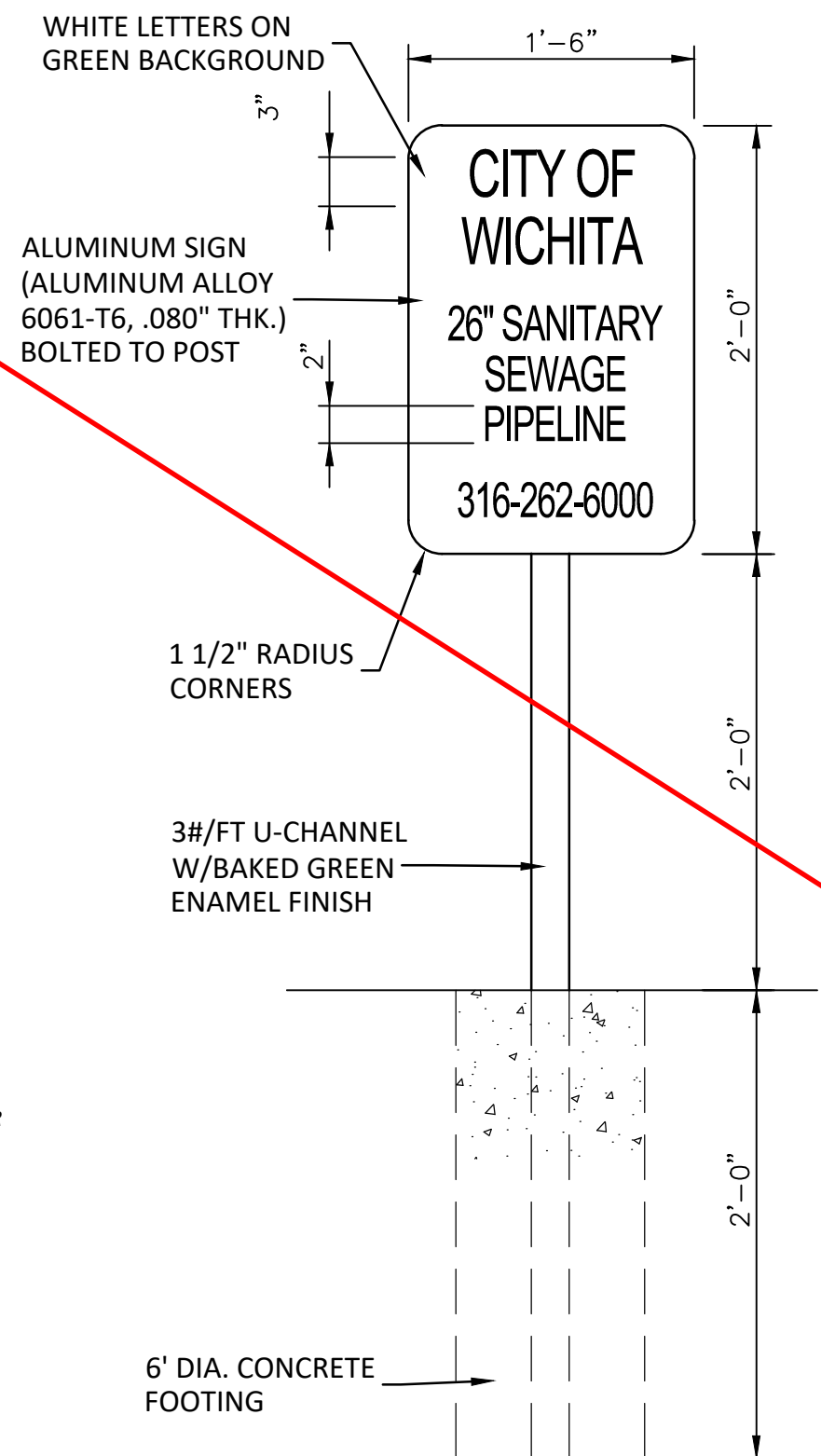
BENCHMARKS

BM #1 - Chiseled "C" in the Top of Curb Located at the Southwest Corner of the Intersection of Hydraulic & Southeast Blvd., 6' East of Fire Hydrant.
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Elev. = 1285.59 (NAVD 88)

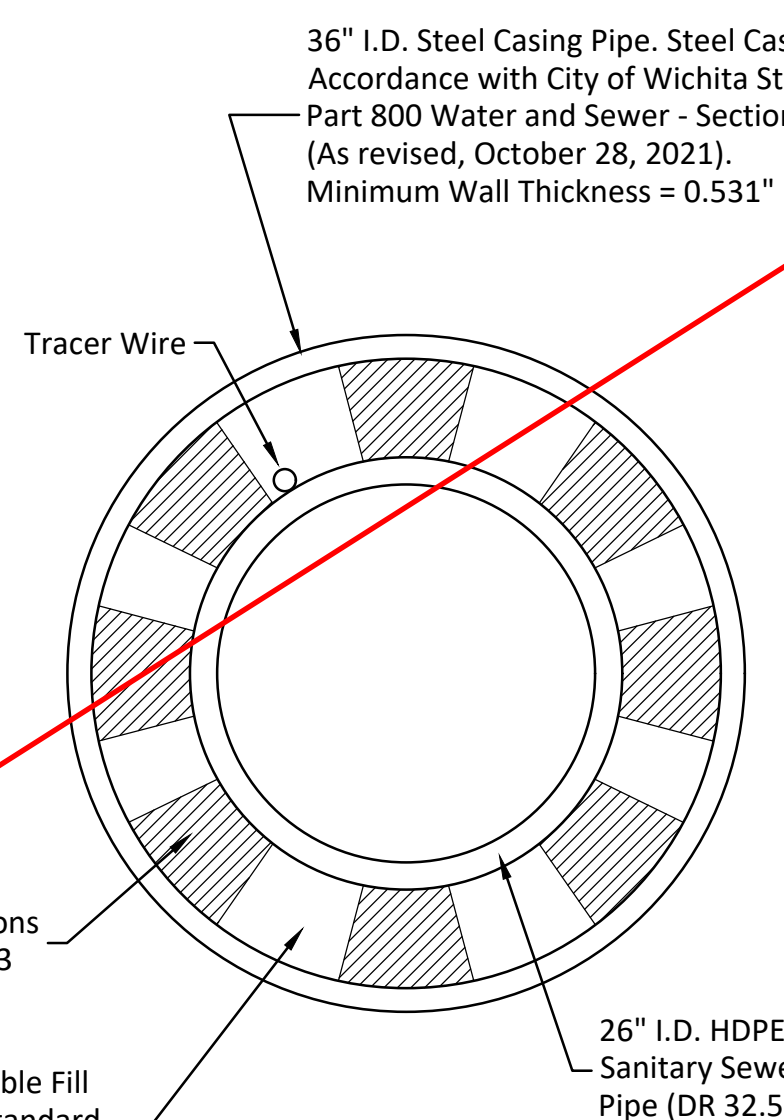
NOTES:

- CONTRACTOR SHALL ADHERE TO THE BNSF UTILITY ACCOMMODATION POLICY (updated February 14, 2022, Part 3 - Utilities Perpendicular to Railroad Property), UNLESS EXPLICITLY STATED OTHERWISE, DURING ALL CASING INSTALLATION, PIPELINE INSTALLATION, OR OTHER CONSTRUCTION RELATED ACTIVITY WITHIN BNSF RIGHT-OF-WAY (ROW).
<https://www.bnsf.com/bnsf-resources/pdf/about-bnsf/utility.pdf>
- THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL SAFETY LAWS AND REGULATIONS INCLUDING BUT NOT LIMITED TO OSHA REQUIREMENTS FOR TRENCH SAFETY, CONFINED SPACE, PERSONAL PROTECTIVE EQUIPMENT, TUNNELING OPERATIONS AND ELECTRICAL SAFETY. WHERE LAWS OR ORDERS OF PUBLIC AUTHORITY GOVERN, THEY SHALL SUPERSEDE THE PROVISIONS SPECIFIED ON THIS PLAN SHEET.
- PRIOR TO THE COMMENCEMENT OF THE RAILWAY CROSSING, THE CONTRACTOR SHALL SUBMIT FOR REVIEW AND APPROVAL AN UPDATED DESCRIPTION OF WORK PROCESS INCLUDING BUT NOT LIMITED TO ALL PLAN AND FIELD CHANGES / MODIFICATIONS, CERTIFICATES OF COMPLIANCE, WORK PLAN AND SCHEDULED ACTIVITIES FOR WORK THAT MAY AFFECT RAILROAD RIGHT-OF-WAY. THE CONTRACTOR SHALL LAYOUT THE PROPOSED BORE AND RECEIVING PITS FOR INSPECTION AND ACCEPTANCE PRIOR TO COMMENCEMENT OF WORK. THE EXECUTION OF WORK ON RAILROAD PROPERTY SHALL BE SUBJECT TO INSPECTION AND DIRECTION OF THE BNSF ROADMASTER OR HER / HIS REPRESENTATIVE.
- WHEN WORK IS PERFORMED WITHIN TWENTY-FIVE (25) FEET OF THE CENTERLINE OF THE TRACK, RAILROAD FLAGGING WILL BE REQUIRED. FLAGGING SERVICES SHALL BE PERFORMED BY BNSF EMPLOYEES OR THEIR DESIGNATED CONTRACTOR. A WRITTEN REQUEST FOR FLAGGING SERVICES SHALL BE SUBMITTED TO BNSF ROADMASTER NO LESS THAN 72 HOURS PRIOR TO THE TIME WHEN SUCH SERVICES ARE NEEDED. FLAGGER COSTS ARE SUBSIDIARY TO THE COST OF THE DRY JACK & BORE OR TUNNELING METHODS.
- CONTRACTOR TO PROTECT ALL RAILROAD PROPERTY, INCLUDING SIGNAL WIRE CONNECTIONS, RAILS, ETC. INCLUDING SETTLEMENT MONITORING REQUIREMENTS, AS LISTED IN BNSF UTILITY ACCOMMODATION POLICY. SEE NOTE 1.
- BORE PITS SHALL NOT BE LOCATED WITHIN BNSF RIGHT-OF-WAY. THE LOCATION / SIZE OF THE BORE PIT SHALL ADHERE TO THE BNSF UTILITY ACCOMMODATION REQUIREMENTS. SEE NOTE 1.
- REDWOOD OR OTHER APPROVED PRESERVATIVE TREATED WOOD SKIDS SHALL BE SECURED TO THE BARREL OF THE CARRIER PIPE WITH METAL BANDS IN SUCH A MANNER TO SUPPORT THE WEIGHT OF THE PIPE ALONG ITS FULL BARREL LENGTH ON THE WOOD SKIDS WITHOUT ANY OF THE WEIGHT SUPPORTED BY THE PIPE BELL AND IN SUCH A MANNER AS REQUIRED TO PROPERLY POSITION THE CARRIER PIPE TO THE SPECIFIED ELEVATIONS AND ALIGNMENT. CASING SPACERS MAY BE USED IN LIEU OF TREATED WOOD SKIDS. THE CASING SPACERS MUST BE LOCATED AS RECOMMENDED BY THE SPACER MANUFACTURER AND APPROVED BY THE ENGINEER.
- THE CASING PIPE SHALL HAVE A "FUSION BONDED EPOXY COATING" (FBE) WITH AN "ABRASION RESISTANT OVERCOATING" (ARO). THE MINIMUM STEEL CASING PIPE WALL THICKNESS SHALL MEET BNSF AND UAP STANDARDS (0.469" MINIMUM FOR 36" CASING, WHEN COATED OR CATHODICALLY PROTECTED). THE CASING PIPE SHALL FOLLOW BNSF UTILITY ACCOMMODATION POLICY. SEE NOTE 1.
- STEEL CASING PIPE WITHIN BNSF RAILROAD ROW SHALL HAVE EXTERIOR OF PIPE COATED WITH AN EPOXY POLYMER CONCRETE COATING OR AN APPROVED EQUAL.
EPOXY POLYMER CONCRETE COATING:
 - A TWO-PART CHEMICALLY CURED EPOXY PRIMER AND ONE OR MORE COATS OF A DIFFERENT TWO-PART CHEMICALLY CURED EPOXY TOP COAT. STEEL CASING PIPE SHALL BE COATED IN ACCORDANCE WITH AWWA C210 AND MANUFACTURER'S RECOMMENDATIONS.
 - CONTAIN AN ABRASION RESISTANT OVERLAY.
 - CATHODIC DISBONDMENT: MAXIMUM 10 MM.
 - DRY FILM THICKNESS: MINIMUM 16 MILS.
 - ADHESION: 800 PSI PER ASTM D4541 (METHOD E).
 - COATING SHALL HAVE NO HOLIDAYS.
- FILL ANNULAR SPACE WITH SAND FROM END SEAL TO END SEAL AFTER CARRIER PIPE HAS BEEN PERMANENTLY PLACED IN CASING PIPE AND APPROVED, IN SUCH A MANNER AS TO NOT DISTURB THE ALIGNMENT OR GRADE OF CARRIER PIPE. EXCAVATABLE FLOWABLE FILL MAY BE USED IN THE ANNULAR SPACE WHEN APPROVED BY THE ENGINEER.
- THE CONTRACTOR SHALL INSTALL A READILY IDENTIFIABLE AND SUITABLE MARKER AT EACH RAILROAD PROPERTY LINE WHERE IT IS CROSSED BY AN UNDERGROUND UTILITY IDENTIFYING THE SIZE OF THE LINE AND ITS DEPTH, UNLESS WITHIN A PUBLIC GRADE CROSSING. SEE SANITARY SEWER MARKER DETAIL THIS SHEET. UTILITY MARKERS SHALL MEET ALL REQUIREMENTS SET FORTH BY THE BNSF UTILITY ACCOMMODATION POLICY. SEE NOTE 1.
- CONTRACTOR SHALL BE AWARE THAT NO WORKERS WITHOUT PROPER IDENTIFICATION ARE TO ENTER BNSF RIGHT-OF-WAY PROPERTY.

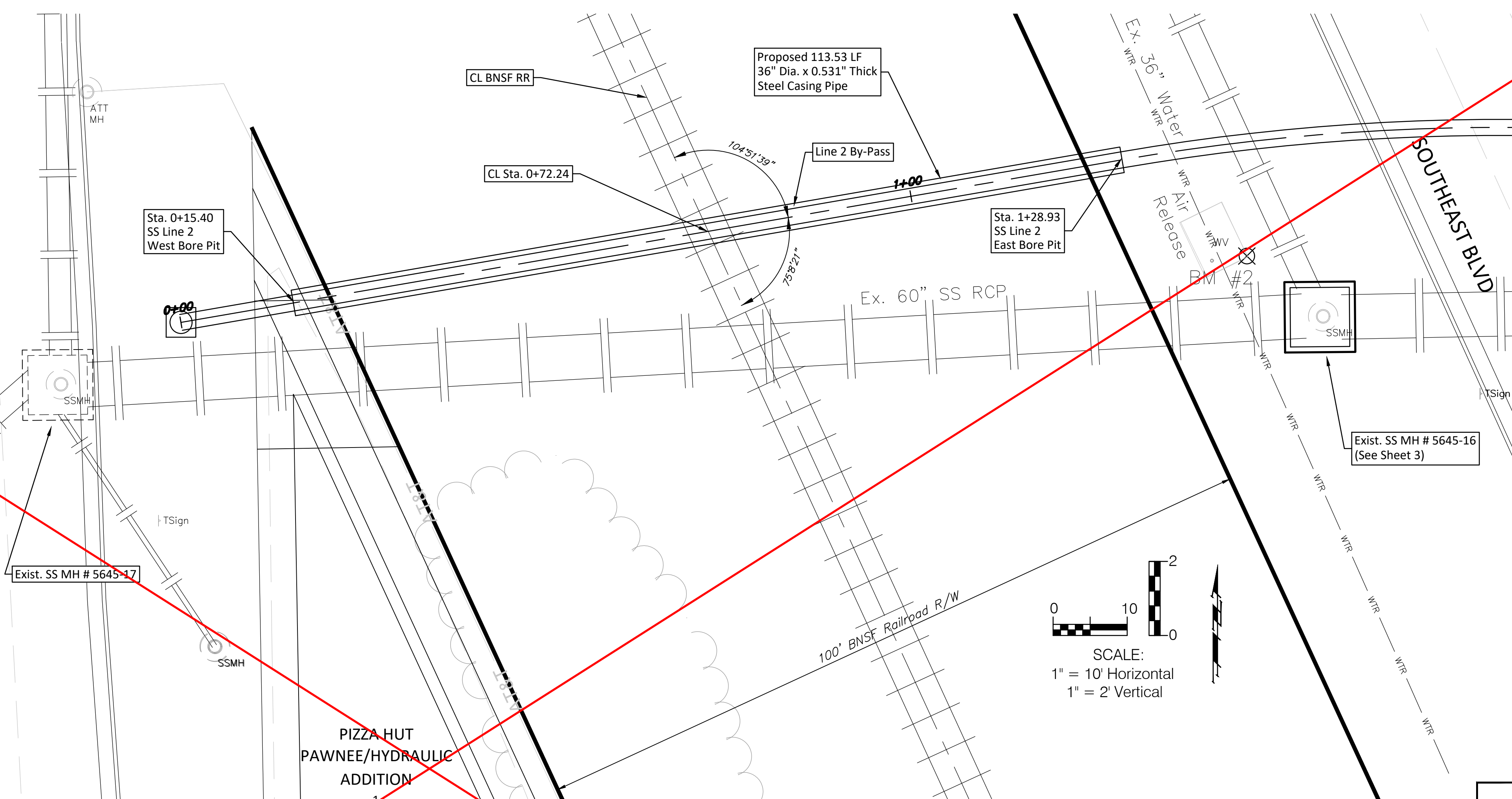


SANITARY SEWER MARKER DETAIL

NOTE:
UTILITY MARKER SHALL MEET ALL REQUIREMENTS SET FORTH BY THE BNSF UTILITY ACCOMMODATION POLICY. SEE NOTE 1.



END VIEW



SS LINE 2 BY-PASS

Station	1300	1295	1290	1285	1280	1275	1270	1265
0+00.00	1276.94 = T.P. SS	1276.94 = T.P. SS	1276.94 = T.P. SS	1276.94 = T.P. SS	1276.94 = T.P. SS	1276.94 = T.P. SS	1276.94 = T.P. SS	1276.94 = T.P. SS
0+15.40	1275.48 = T.P. SS	1275.48 = T.P. SS	1275.48 = T.P. SS	1275.48 = T.P. SS	1275.48 = T.P. SS	1275.48 = T.P. SS	1275.48 = T.P. SS	1275.48 = T.P. SS
0+50	1275.48 = T.P. SS	1275.48 = T.P. SS	1275.48 = T.P. SS	1275.48 = T.P. SS	1275.48 = T.P. SS	1275.48 = T.P. SS	1275.48 = T.P. SS	1275.48 = T.P. SS
1+00	1275.48 = T.P. SS	1275.48 = T.P. SS	1275.48 = T.P. SS	1275.48 = T.P. SS	1275.48 = T.P. SS	1275.48 = T.P. SS	1275.48 = T.P. SS	1275.48 = T.P. SS
1+28.93	1275.48 = T.P. SS	1275.48 = T.P. SS	1275.48 = T.P. SS	1275.48 = T.P. SS	1275.48 = T.P. SS	1275.48 = T.P. SS	1275.48 = T.P. SS	1275.48 = T.P. SS

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Wichita, KS 67211
316-262-7271
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HYDRAULIC & SE BLVD SS

SANITARY SEWER LINE 2 DETAILS

CAPITAL IMPROVEMENT PROJECT

PROJECT NUMBER: 468-85276

DESIGN: ENG DRAWN: JSB

DATE: January 26, 2023

SHEET 4B OF 24

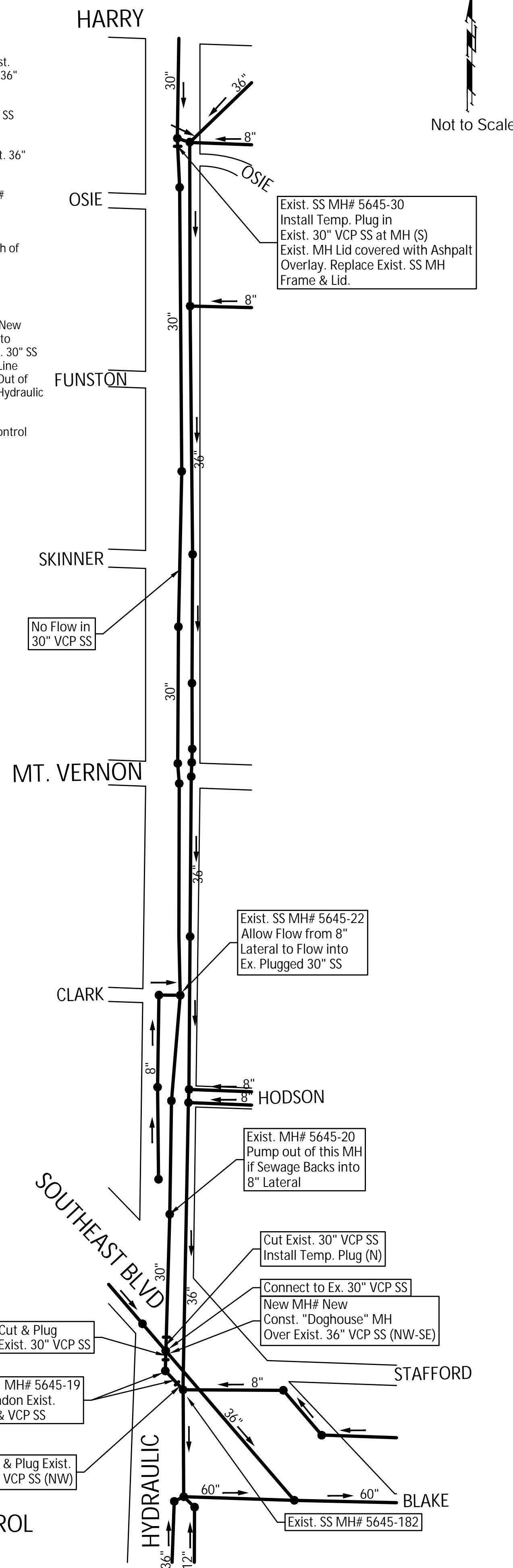
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CONSTRUCTION SEQUENCE:

- Near Osie Street, Install Temporary Plug in Exist. 30" SS Pipe(S), at Exist. SS MH# 5645-30.
- Allow Exist. 30" SS to drain South, then Cut and Plug Exist. 30" SS Pipe North of New MH# New, located over Exist. 36" SS in Hydraulic Avenue.
- Allow Exist. 8" SS Lateral to drain into Plugged Exist. 30" SS Line at Exist. SS MH# 5645-22, near Clark Street.
- Construct New "Doghouse" Style SS MH# New over Exist. 36" SS in Hydraulic Avenue.
- Don't Cut Top half of Exist. 36" SS Pipe until New SS MH# New has Passed Vacuum Testing.
- Cut out Top half of Exist. 36" SS Pipe in SS MH# New. Remove both Temporary Plugs in Exist. 30" SS Pipe North of New SS MH# New.

GENERAL NOTES:

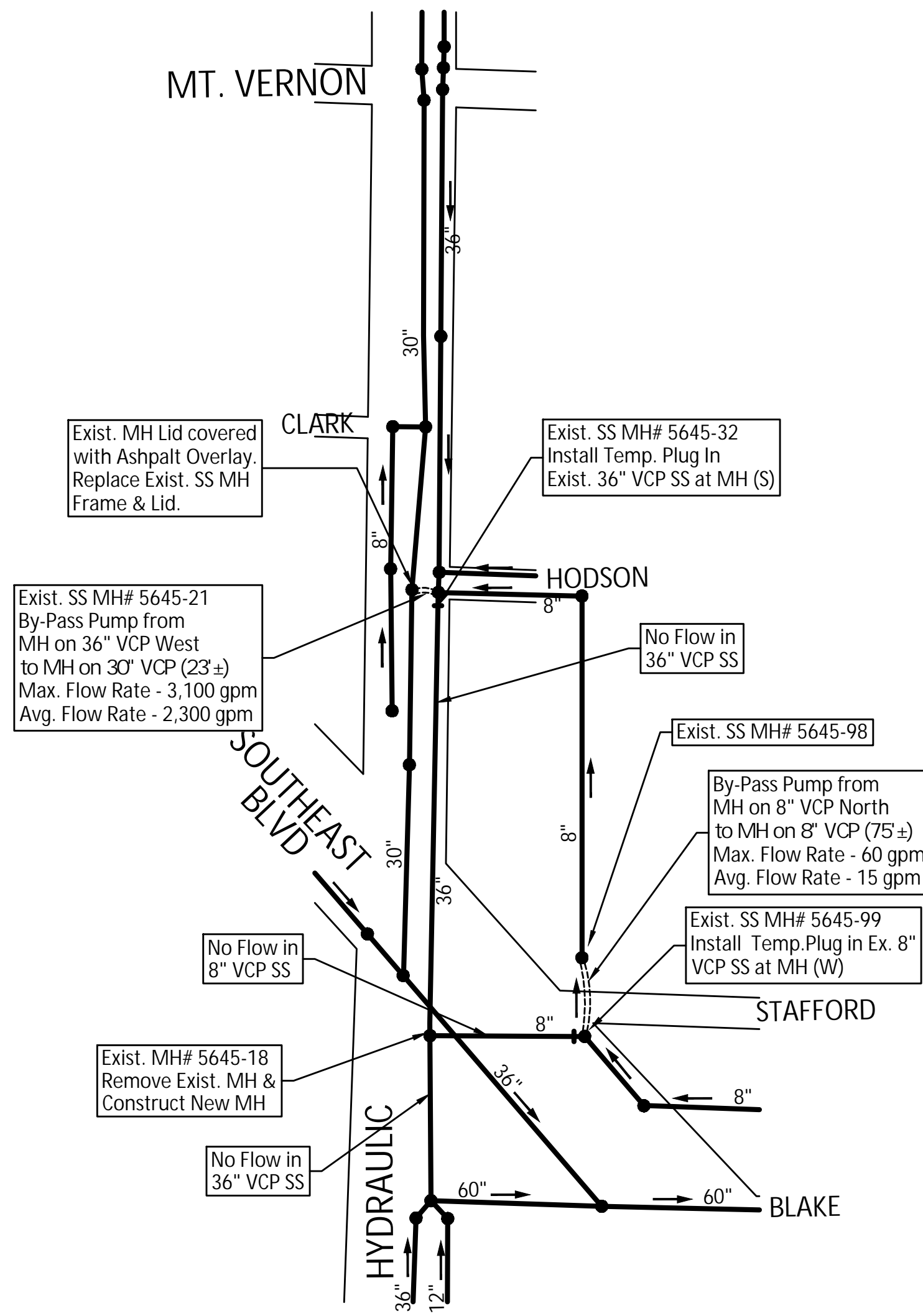
- Once the Exist. 30" SS Pipe is Plugged, the New SS MH# New must be Constructed & Operational, as Soon as Possible, to prevent the Exist. 8" SS Lateral Line from Filling the Exist. 30" SS Line and Backing Up Sewage Flow. If Exist. 8" SS Lateral Line Begins to Fill and Back Flow, Sewage MUST be Pumped Out of Exist. SS MH# 5645-20, located North of Intersection in Hydraulic Avenue.
- If Pumping Sewage Backflow is Required, Erect Traffic Control per KDOT Detail TE700 and TE702, Sheets 11 & 12.



SEWAGE FLOW CONTROL PHASE 1

CONSTRUCTION SEQUENCE:

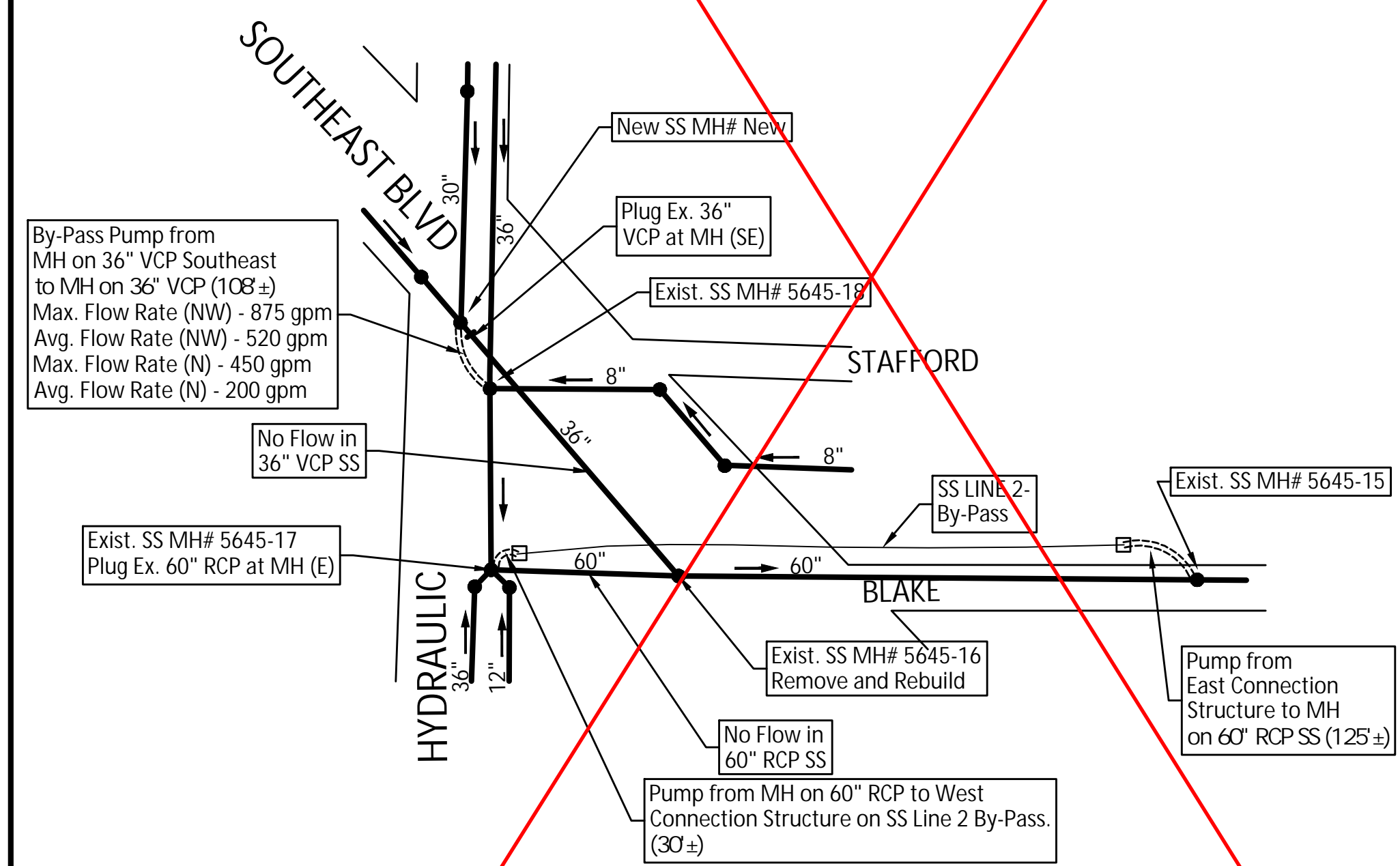
- At Southeast corner of Hodson & Hydraulic Avenue, Install Temporary Plug in 36" VCP SS (S), at Exist. SS MH# 5645-32.
- Pump Sewage from Exist. SS MH# 5645-32, West to Exist. SS MH# 5645-21, located over Exist. 30" SS.
- At Southeast corner of Stafford & Southeast Blvd., Install Temporary Plug in Exist. 8" VCP SS (W), at Exist. SS MH# 5645-99.
- Pump Sewage from Exist. SS MH# 5645-99, North across Stafford to Exist. SS MH# 5645-98, located over 8" VCP SS in Alley.
- Remove & Replace Exist. SS MH# 5645-18, over Exist. 36" VCP SS (N-S), located in Hydraulic Avenue at Sta. 1+13.13, SS Line 1. See Sheet 3.



SEWAGE FLOW CONTROL PHASE 2

CONSTRUCTION SEQUENCE:

- At Intersection of Hydraulic Avenue and Southeast Blvd., Install Temporary Plug in 36" VCP SS (SE), at New SS MH# New.
- Pump Sewage from New SS MH# New Southeast to Rebuilt SS MH# 5645-18, located over Exist. 36" SS (N-S) and 8" (E).
- In Hydraulic Avenue, Install Temporary Plug in 60" RCP(E), at Exist. SS MH# 5645-17.
- Pump Sewage from Exist. SS MH# 5645-17, into West Connection Structure - SS Line 2 By-Pass.
- Pump Sewage from East Connection - SS Line 2 By-Pass into Exist. SS MH# 5645-15, located in Blake Street.
- Remove & Replace Exist. SS MH# 5645-16, over Exist. 60" RCP SS (E-W), and Exist. 36" SS (NW) located between Railroad Tracks and Southeast Blvd.



SEWAGE FLOW CONTROL PHASE 3

GENERAL NOTES:

- The Contractor SHALL Limit the Amount of Time the Flow Through By-Pass is in Place to 4 Days.



BAUGHMAN COMPANY

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HYDRAULIC & SE BLVD SS

SANITARY SEWER SEWAGE FLOW CONTROL

CAPITAL IMPROVEMENT PROJECT

PROJECT NUMBER: 468-85276

DESIGN: ENG DRAWN: JSB

DATE: January 26, 2023

SHEET 8 OF 24

File: E:\Projects\Hydraulic & SE Blvd SS-17-11-E672\SS Base.dwg