

Meade County
P 7668(05)
PCN 04AE

A Pre-Bid meeting will be held in Sturgis at the Sturgis Fire Hall (1901 Ballpark Road) from 10:00am to 12:00pm MT on Thursday, February 18, 2016. All interested parties are strongly encouraged to attend.

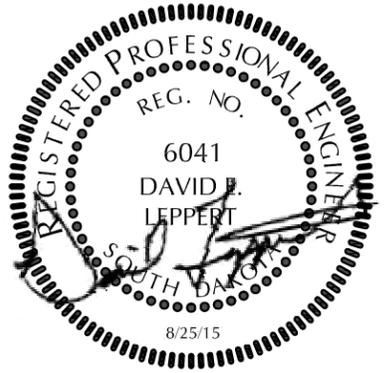
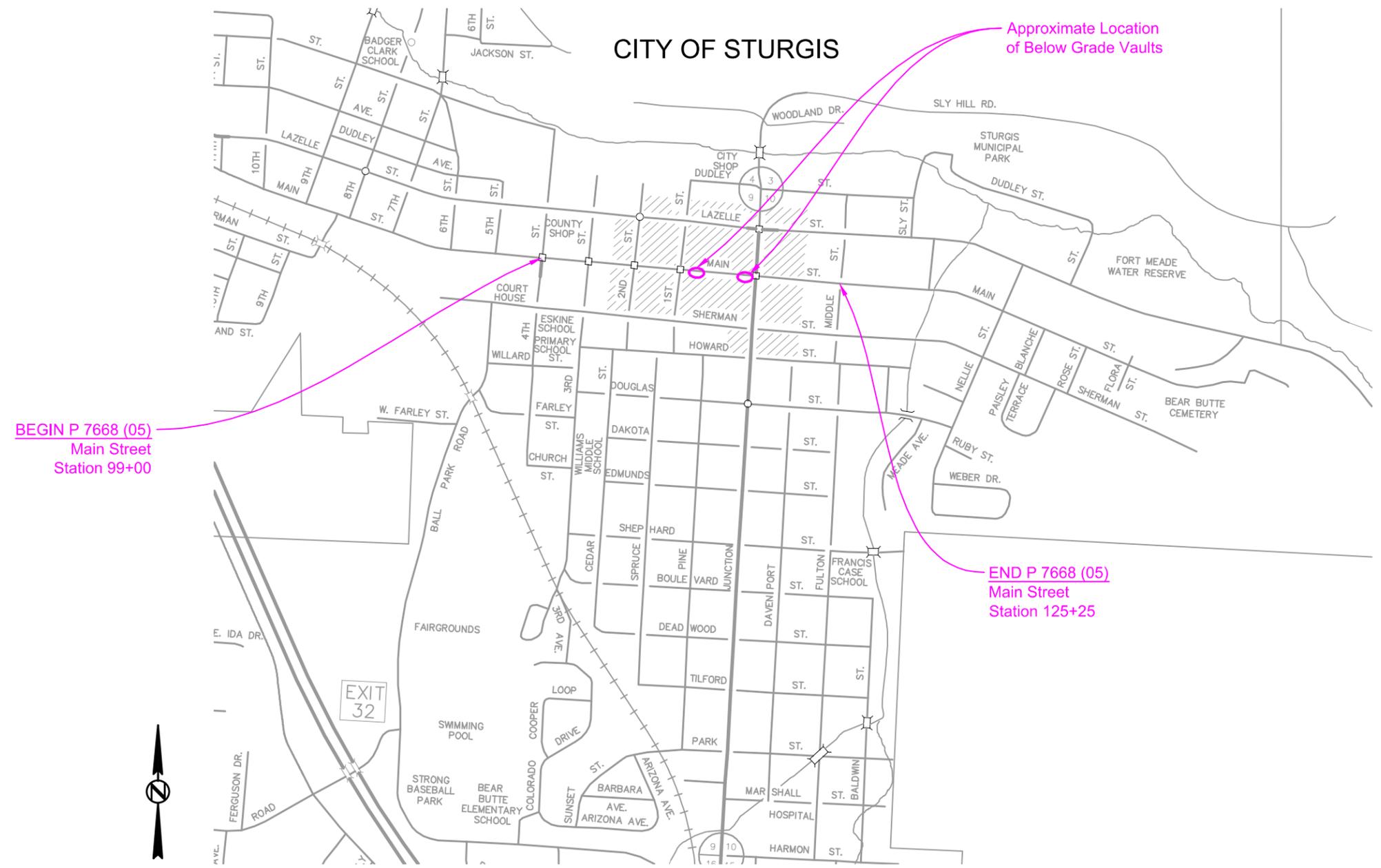
SECTION E: STRUCTURE PLANS FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 7668 (05)	E1	E4

Plotting Date: 8/20/2015

INDEX OF SHEETS

E1	General Layout with Index
E2	Estimate of Quantities and Notes
E3 - E4	Sidewalk Vault



L:\14-2030 Sturgis Main St Recover\Drawings\Eng\Sheet Files\Section E\14-2030 SECTION E.dwg 8/20/2015 4:39:23 PM

SECTION E ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E3300	Three Man Survey Crew	10	Hour
110E1790	Remove Concrete Vault Lid	980	SqFt
420E0400	Structure Excavation, Miscellaneous	67	CuYd
430E0300	Granular Bridge End Backfill	213	CuYd
460E0100	Class A45 Concrete, Miscellaneous	41	CuYd
460E0380	Install Dowel in Concrete	199	Each
480E0200	Epoxy Coated Reinforcing Steel	4878	Lb

GENERAL NOTES

All dimensions and conditions must be verified in the field. Any discrepancies shall be brought to the attention of the Engineer before proceeding with the affected part of the work.

The structure is designed to be self-supporting and stable after construction is complete. It is the contractor's sole responsibility to determine erection procedures and sequence to ensure safety of the structure and its components during erection. This includes the addition of necessary shoring, sheeting, temporary bracing (and accompanying footings), guys or tie downs.

DESIGN SPECIFICATIONS

- AASHTO LRFD Bridge Design Specifications, 2014 with 2015 interims

DESIGN LOADS

The structural system for this structure has been designed with the following superimposed loadings:

Walls:	Lateral Load	60 pcf EFEP
	Vehicle Surcharge	2'-0" Equiv. Soil Height
	Sidewalk Surcharge	80 psf (non-current with vehicle surcharge)

FOUNDATIONS

Foundations are designed for an allowable soil bearing pressure of 1,500 pcf on existing soils. Compact soils below footings to 95% of Modified Proctor (ASTM D1557).

PLUMBING SLEEVES

Minimum sleeve spacing shall be two diameters center to center to the larger sleeve or 6" clear between sleeves, whichever is greater. Prior to construction sleeve locations and sizes shall be approved by the Engineer.

PENETRATIONS

No penetrations shall be made in any structural members other than those located on these drawings without previous approval of the Engineer.

CONCRETE

All concrete shall be class A45 conforming to Section 460.

All reinforcing steel shall conform to ASTM A615, Grade 60 (epoxy coated).

All exposed edges shall be chamfered 3/4" inch.

Use 2 inch clear cover on all reinforcing steel, except as shown.

All costs for furnishing and installing 1/2" isolation joint and water stop shall be incidental to the contract unit price per cubic yard for Class A45 Concrete, Miscellaneous.

Quantities shown are for the concrete for all portions of the concrete vault including footings, tie beams, foundation walls and top concrete sidewalk slab.

INSTALL DOWELS - CHEMICAL CONCRETE ANCHORS

Chemical concrete anchors shall be a polymer injection system such as Ramset "Epcon", Molly "Paramount HVC", SIKA "Sikadur Injection SEL", "HILTI - High Strength Epoxy", or approved equal, installed in accordance with the manufacturer's instructions. Installers shall be trained by the manufacturer's representative.

Install dowels into existing stone or concrete walls where shown. All dowels shall be paid for under the bid item for Install Dowel in Concrete regardless of substrate material drilled and attached to. Dowels shall be deformed reinforcing bars as shown on Sheet E3.

REMOVE CONCRETE VAULT LID

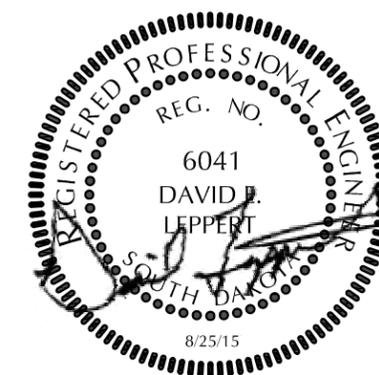
Debris and stored materials within the vault itself shall be removed by the Landowner prior to the Contractor starting demolition work.

Existing concrete vault lid is generally constructed of a concrete slab over the top of a metal form deck and supporting steel purlin framing. The existing concrete vault lid shall be removed and legally disposed of by the contractor as shown on Sheet E3. All work associated with removal of the lid, including all saw-cuts, demolition, hauling and disposal of materials shall be considered incidental to the bid item for Remove Concrete Vault Lid. Refer to ENVIRONMENTAL COMMITMENTS in Section A for additional information with regard to removal and disposal of materials.

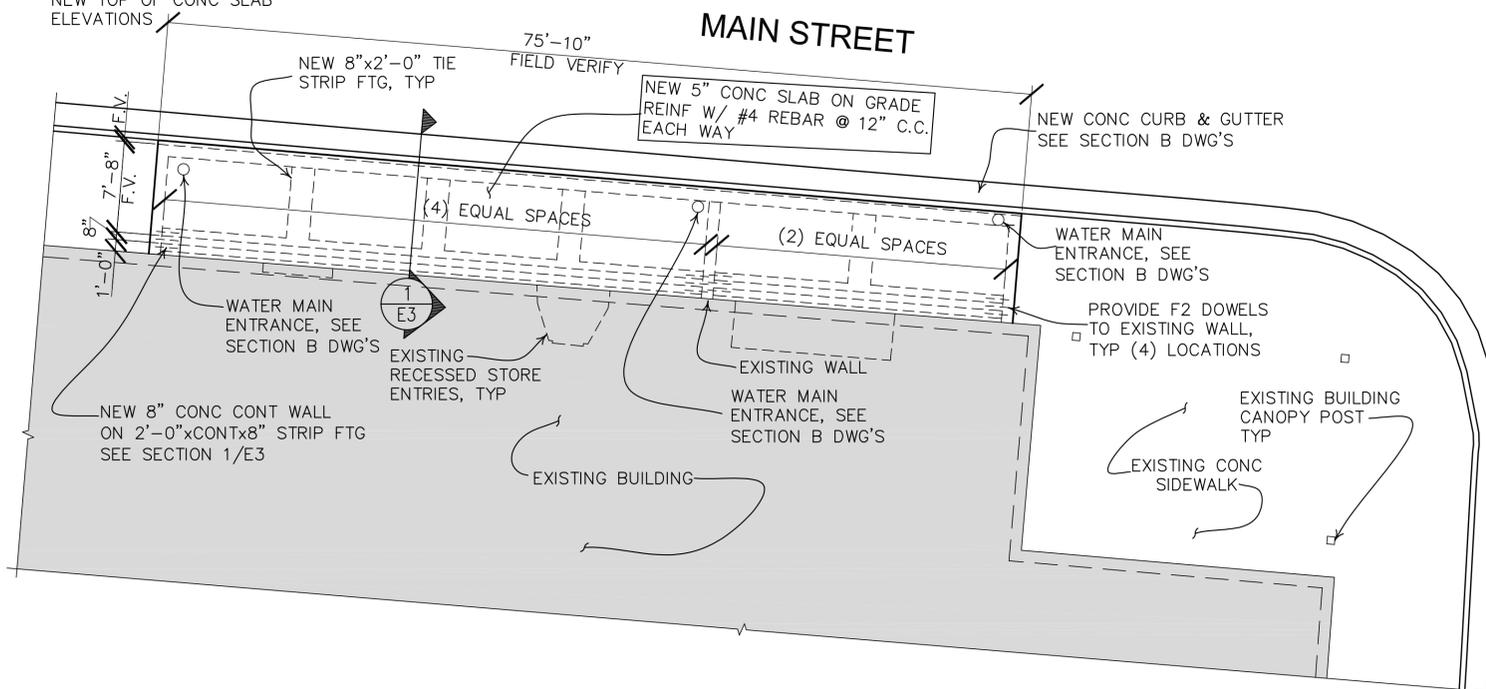
Contractor shall be responsible for locating all utilities that may exist within the existing vault and take all necessary precautions as needed to prevent damage of said utilities. Utilities that are to be abandoned shall be coordinated with the specific utility company and Landowner.

STAKING VAULT WALLS

Any necessary staking for the Existing Vault Abandonments, including but not limited to foundation location, plumbing sleeves, anchoring, penetrations, concrete, dowel installation, concrete removals, and elevations shall be paid for at the contract unit price per hour for Three Man Survey Crew.

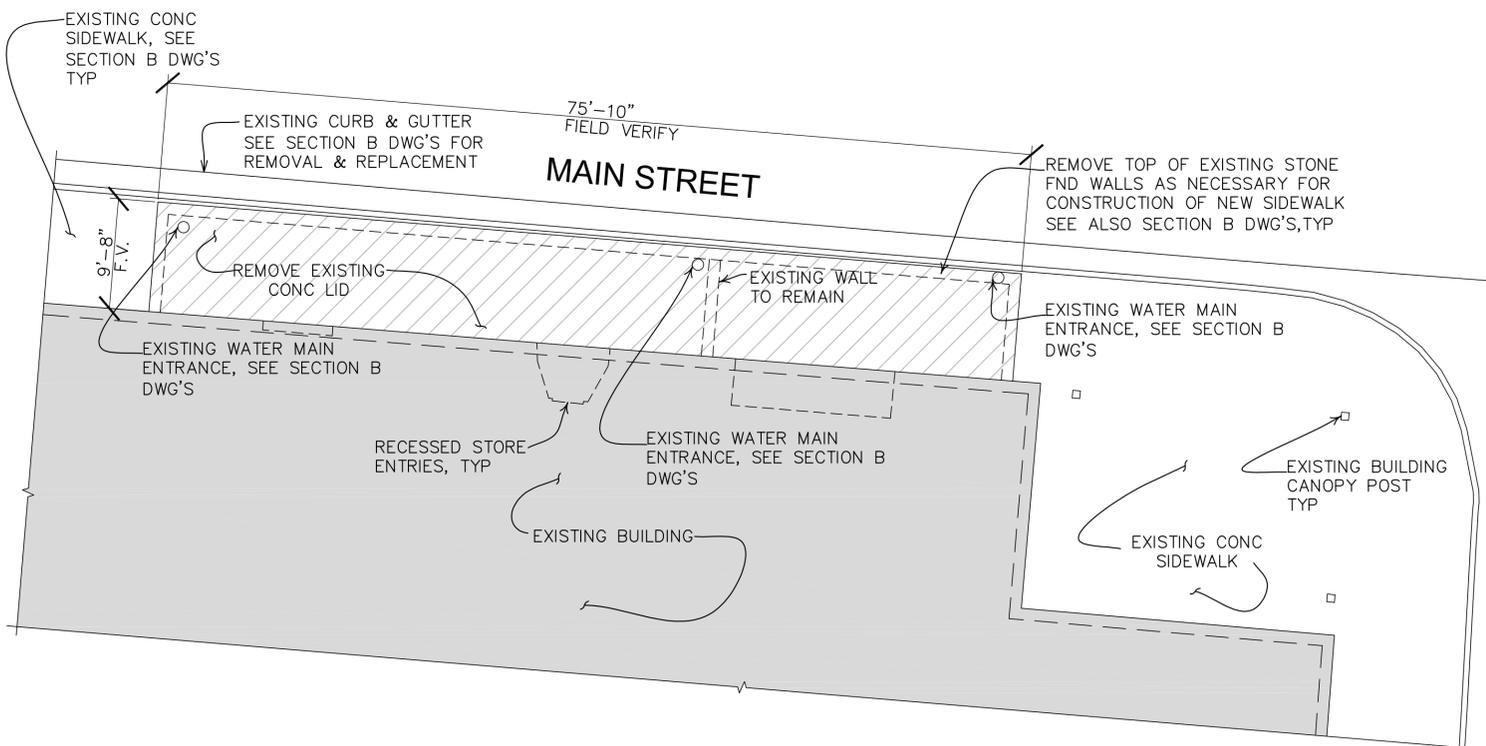


NOTE:
SEE SECTION B DWG'S FOR
NEW TOP OF CONC SLAB
ELEVATIONS



1006 TO 1012 MAIN STREET (STA. 116+64 TO STA. 117+42)
SLAB & FOUNDATION PLAN – SIDEWALK VAULT INFILL

SCALE: 1/16"=1'-0"



1006 TO 1012 MAIN STREET (STA. 116+64 TO STA. 117+42)
DEMOLITION PLAN – SIDEWALK VAULT INFILL

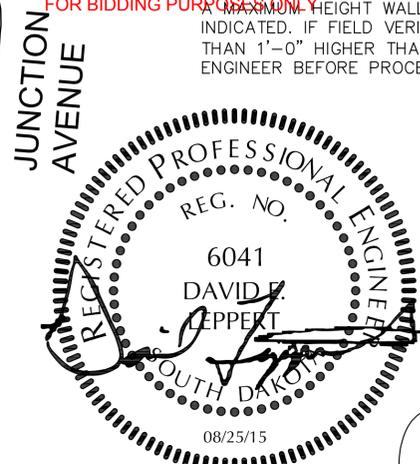
SCALE: 1/16"=1'-0"



PLAN NOTES

- FIELD VERIFY & COORDINATE ALL DIMENSIONS WITH SECTION B DWG'S BEFORE CONSTRUCTION COMMENCES.
- SEE SECTION B DWG'S FOR INFORMATION NOT SHOWN, INCLUDING BUT NOT LIMITED TO LIMITS OF DEMOLITION, CONCRETE ELEVATIONS AND SLOPES, WATERPROOFING AND COORDINATE WITH OTHER TRADES INCLUDING LANDSCAPE, MECHANICAL AND ELECTRICAL.
- PROVIDE TOOLED JOINTS IN NEW SLAB ON GRADE MATCHING SIDEWALK JOINT PATTERN. SEE SECTION B DWG'S. COMPACTION OF BACKFILL TO BE LIMITED TO HAND OPERATED EQUIPMENT.
- FREE DRAINING BACK FILL MATERIAL SHALL CONFORM TO THE GRADATION REQUIREMENTS OF GRANULAR BRIDGE END BACK FILL, SEE SECTION 880 OF THE SDDOT STANDARD SPECIFICATIONS.
- 8" CONCRETE WALL REINFORCING IS BASED UPON A MAXIMUM HEIGHT WALL OF 8'-4" AS INDICATED. IF FIELD VERIFIED DIMENSION IS MORE THAN 1'-0" HIGHER THAN THAT SHOWN, CONTACT ENGINEER BEFORE PROCEEDING WITH WORK.

FOR BIDDING PURPOSES ONLY



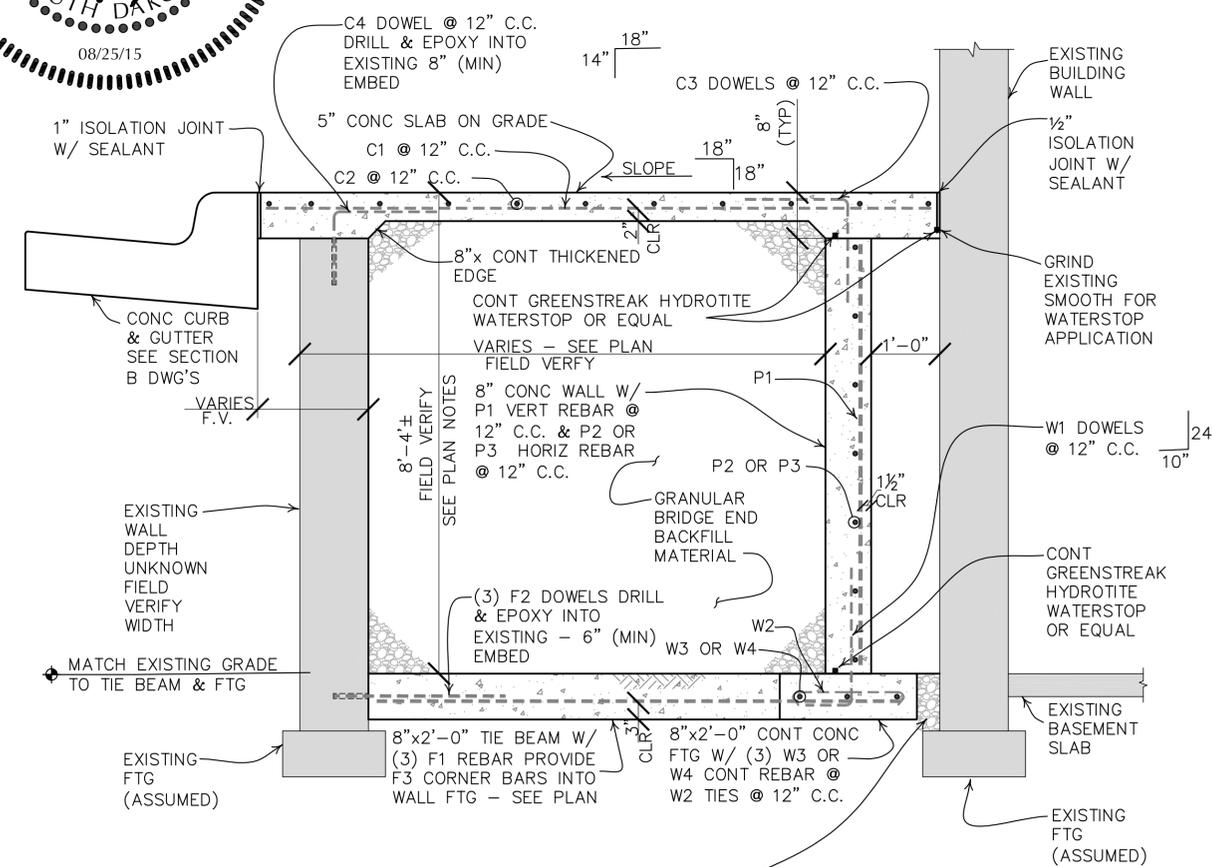
REVISED 12/11/15

REINFORCING SCHEDULE

MK	NO	SIZE	LENGTH		TYPE	BENDING DETAILS
			FT	IN		
C1	76	4	9	4	STR	
C2	33	4	26	8	STR	
C3	76	4	3	0	17A	
C4	76	4	2	6	17A	
P1	74	6	7	6	STR	
P2	14	4	25	1	STR	
P3	7	4	25	3	STR	
W1	74	5	5	6	17A	
W2	74	4	2	4	1	
W3	3	7	25	1	STR	
W4	6	7	28	3	STR	
F1	12	5	7	9	STR	
F2	24	5	2	0	STR	
F3	8	5	3	0	17A	

• MINIMUM LAP REQUIREMENTS
#4 - 1'-6"
#7 - 4'-6"

• ALL DIMENSIONS ARE OUT TO OUT OF BARS. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS AND ELEVATIONS PRIOR TO ORDERING STEEL.



SECTION
E3 3/8" = 1'-0"

PROVIDE 3/4" CLEAN ROCK BETWEEN NEW FOOTING AND EXISTING FOR DRAINAGE OF CAVITY SPACE. CLEAN ROCK SHALL BE INCIDENTAL TO FREE DRAINING BACK FILL

REVISD 12/11/15

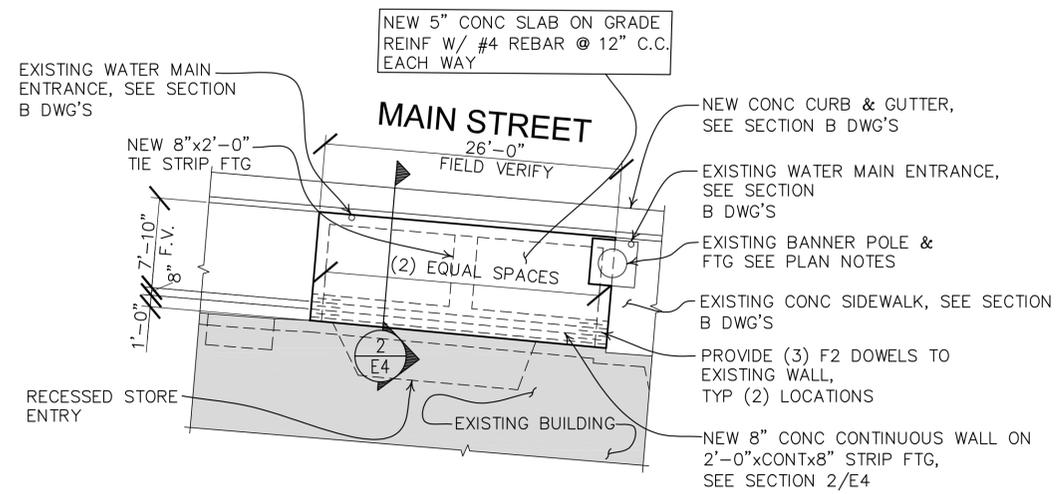
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- EXISTING 1064 MAIN STREET VAULT IS CURRENTLY BACKFILLED WITH EARTH FILL MATERIAL. CONTRACTOR SHALL REMOVE FILL MATERIAL TO CONSTRUCT NEW WALL AND FOOTING AS INDICATED. ALL COSTS ASSOCIATED WITH REMOVAL OF EXISTING FILL MATERIAL SHALL BE INCLUDED IN THE UNIT BID PRICE FOR STRUCTURE EXCAVATION, MISCELLANEOUS.
- EXISTING LIGHT POLE SHALL BE REMOVED AND SALVAGED, SEE SECTION B DRAWINGS.
- EXISTING BANNER POLE AND FOOTING ARE TO REMAIN IN PLACE. CONTRACTOR SHALL TAKE MEASURES TO PROTECT DURING VAULT WALL CONSTRUCTION OR SHALL REMOVE AND RESET USING A LIKE SIZED FOOTING AND ANCHORS.

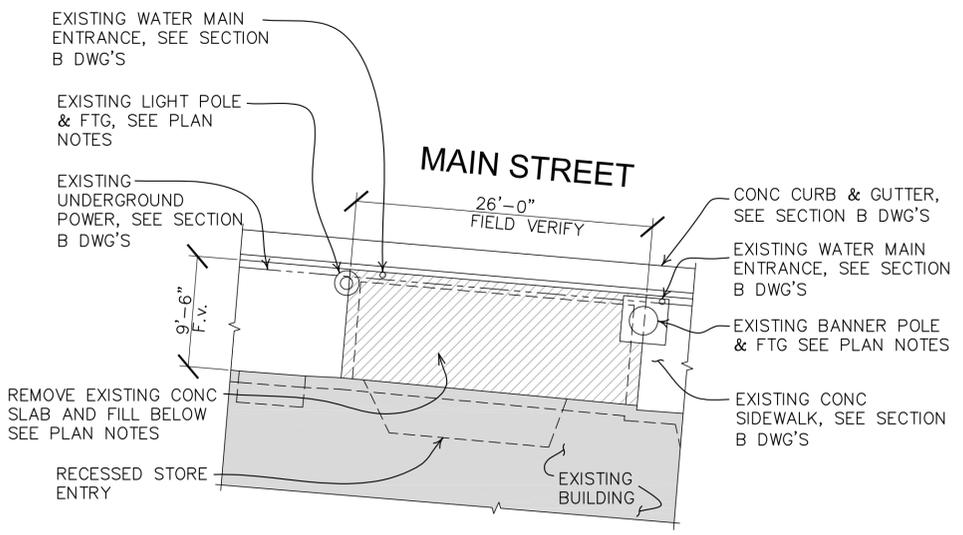
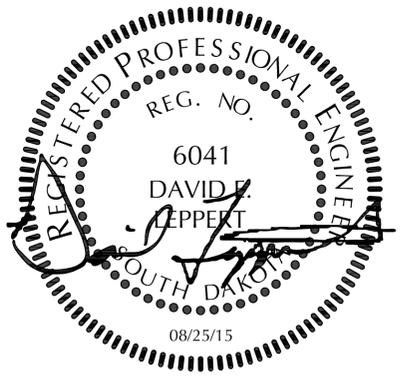
REINFORCING SCHEDULE						BENDING DETAILS	
MK	NO	SIZE	LENGTH		TYPE	BENDING DETAILS	
			FT	IN			
C1	27	4	9	4	STR		TYPE 17A
C3	27	4	3	0	17A		
C4	27	4	2	6	17A		
C5	11	4	25	6	STR		
P1	25	6	7	6	STR		
P4	7	4	24	0	STR		TYPE 1
W1	25	5	5	6	17A		
W2	25	4	2	4	1		
W5	3	7	24	0	STR		TYPE 17A
F1	3	5	7	9	STR		
F2	9	5	2	0	STR		
F3	2	5	3	0	17A		

MINIMUM LAP REQUIREMENTS
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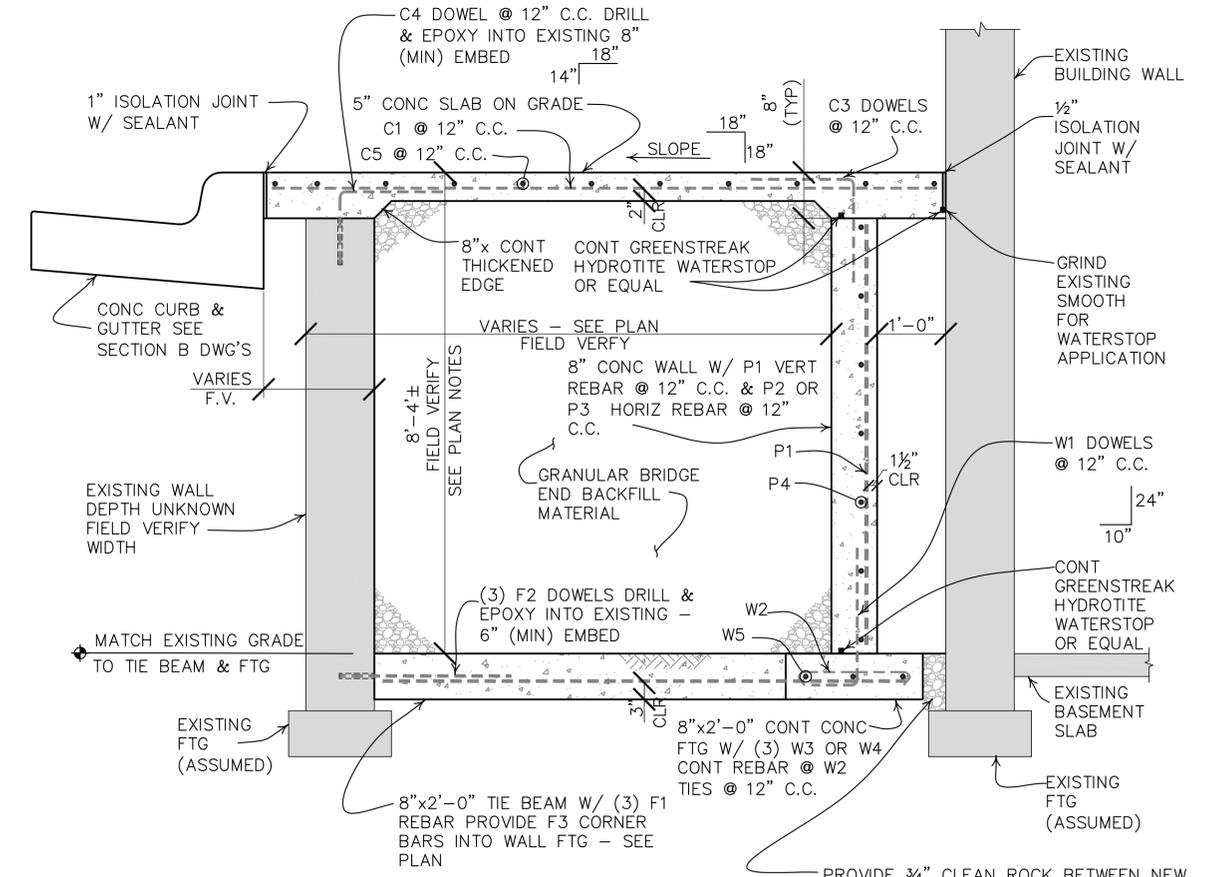
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1064 MAIN STREET (STA. 113+13 TO STA. 113+39)
 SLAB & FOUNDATION PLAN – SIDEWALK VAULT INFILL
 SCALE: 1/16"=1'-0"



1064 MAIN STREET (STA. 113+13 TO STA. 113+39)
 DEMOLITION PLAN – SIDEWALK VAULT INFILL
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SECTION 2
 E4
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