

PROJECT DESCRIPTION : CONSTRUCT NEW TWO SPAN GIRDER BRIDGE ON THE NDRTH SIDE OF THE EXISTING TWO SPAN TRUSS BRIDGE. TH-8 REQUIRES REALIGNMENT AND ROADWORK RELATIVE TO THE BRIDGE. TH-10 REQUIRES REALIGNMENT AND ROADWORK. EXISTING BRIDGE WILL BE REMOVED AFTER PROPOSED BRIDGE IS CONSTRUCTED.

# STATE OF VERMONT AGENCY OF TRANSPORTATION



## PROPOSED IMPROVEMENT BRIDGE PROJECT

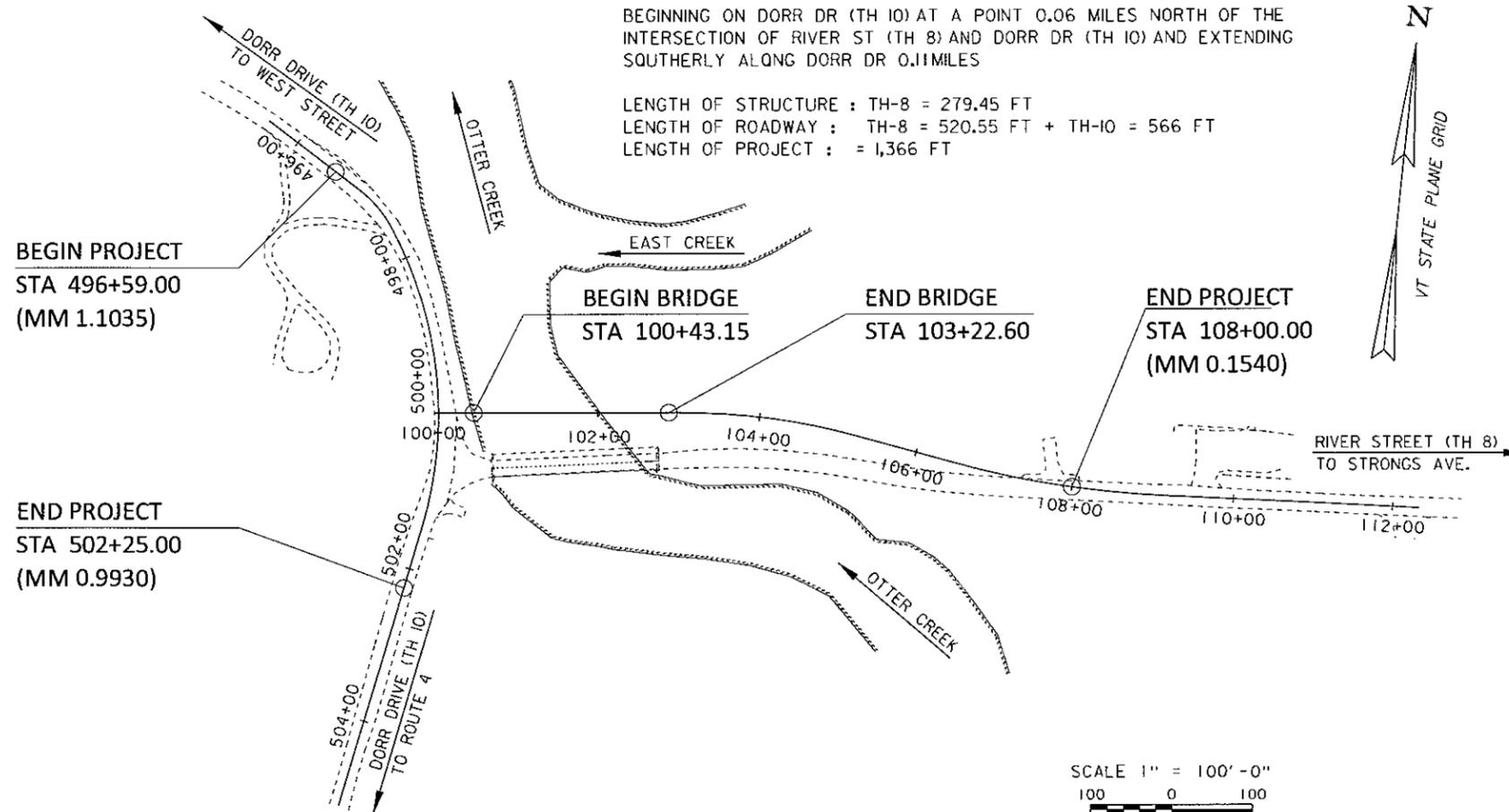
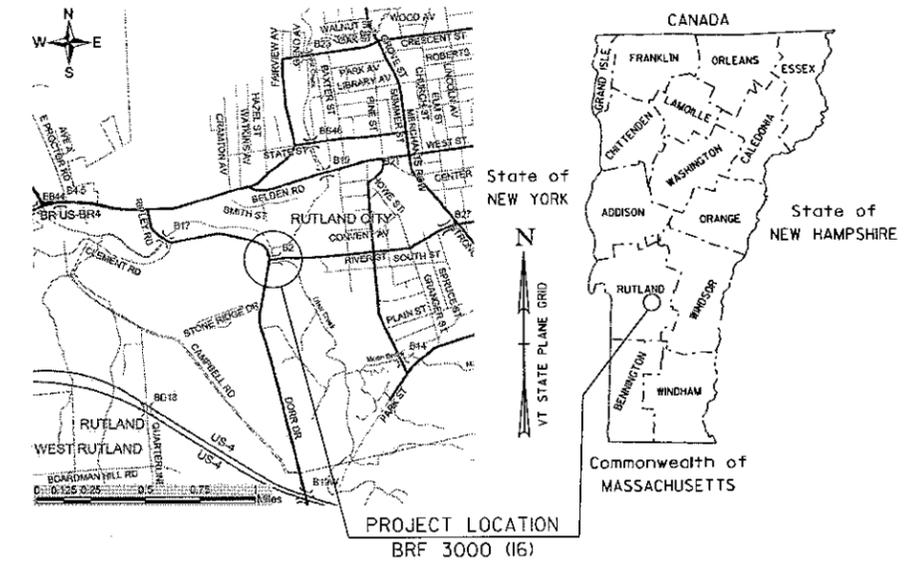
CITY OF RUTLAND  
COUNTY OF RUTLAND

ROUTE NO : TH 8 (RIVER STREET) Urban Collector - FAU 3052  
TH 10 (DORR DRIVE) Urban Collector- FAU 3008  
BRIDGE NO : 2 (TH 8)

BEGINNING AT THE INTERSECTION OF DORR DR (TH 10) AND RIVER ST (TH 8) AND EXTENDING EASTERLY ALONG RIVER ST (TH 8), 0.15 MILES.

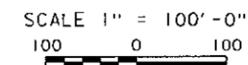
BEGINNING ON DORR DR (TH 10) AT A POINT 0.06 MILES NORTH OF THE INTERSECTION OF RIVER ST (TH 8) AND DORR DR (TH 10) AND EXTENDING SOUTHERLY ALONG DORR DR 0.11MILES

LENGTH OF STRUCTURE : TH-8 = 279.45 FT  
LENGTH OF ROADWAY : TH-8 = 520.55 FT + TH-10 = 566 FT  
LENGTH OF PROJECT : = 1,366 FT



CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2011, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JULY 20, 2011 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

QUALITY ASSURANCE PROGRAM : LEVEL 2	
SURVEYED BY :	L. ORVIS
SURVEYED DATE :	MARCH 2000
DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83 (92)



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May 26, 2015  
RESUBMIT APPROVED ✓  
BY C. Carlson DATE 05-26-2015

PROJECT MANAGER : CAROLYN CARLSON  
PROJECT NAME : RUTLAND CITY  
PROJECT NUMBER : BRF 3000 (116)  
SHEET 122 OF 245 SHEETS

ALL FENCE ITEMS  
SEE ROADWAY LAYOUTS

ELECTRICAL CONDUIT  
SEE UTILITY PLANS

SPECIAL PROVISION (C-900 PVC,  
ALL-INCLUSIVE) (12" SEWER OVERFLOW)  
500+92.5 TO 501+29.4 LT (OVERFLOW)

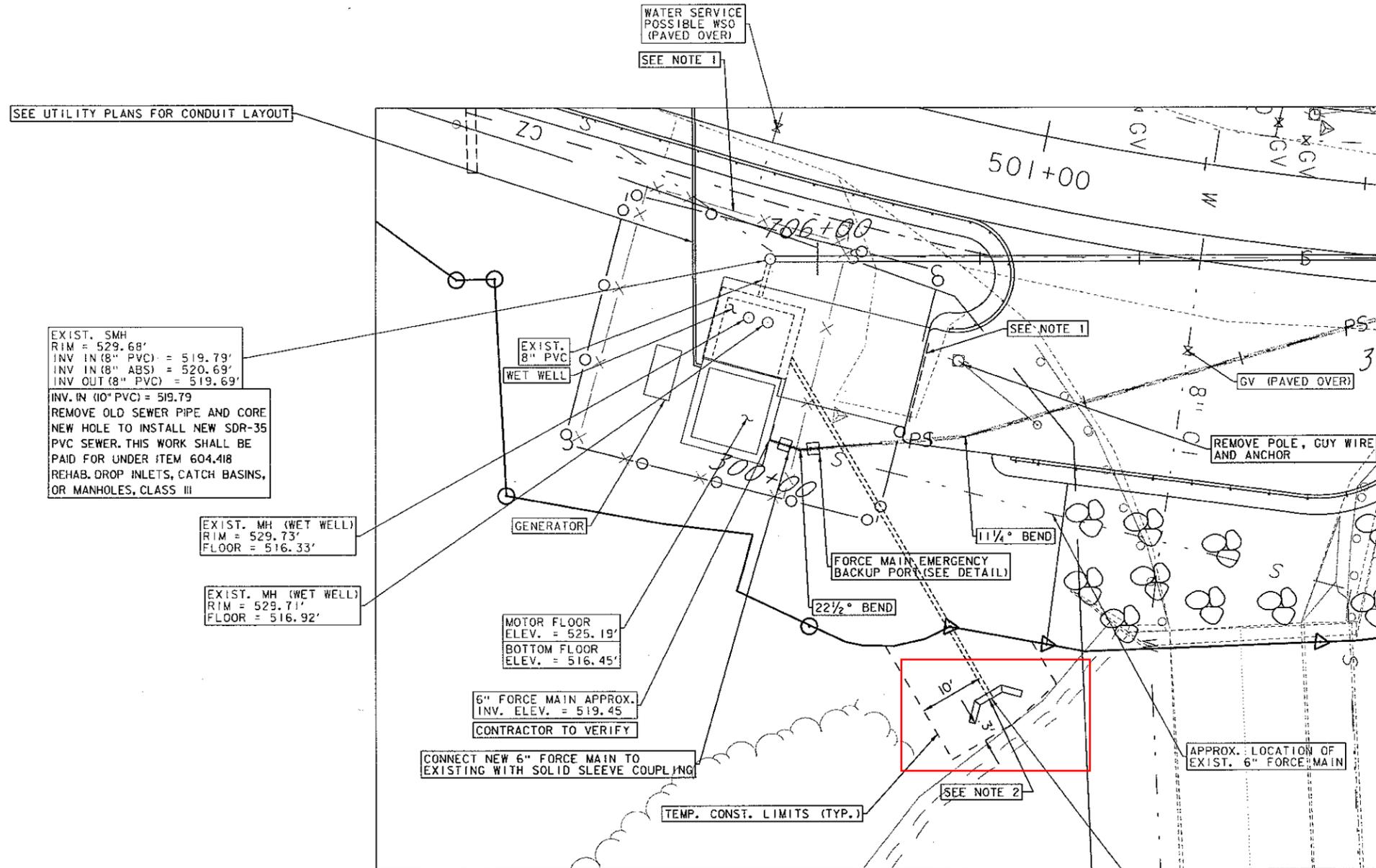
SPECIAL PROVISION (FLAPPER VALVE AND HEADWALL)  
500+92.5 LT

SPECIAL PROVISION (EMERGENCY BACKUP PORT)  
501+23.3 LT

GATE VALVE WITH VALVE BOX  
501+23.3 LT (6") (2) (FOR EMERGENCY BACKUP PORT)

REHAB. DROP INLETS, CATCH BASINS,  
OR MANHOLES, CLASS III  
501+36.1 LT

SPECIAL PROVISION (TRANSITE PIPE REMOVAL)  
500+92.5 TO 501+29.4 LT



EXIST. SMH  
RIM = 529.68'  
INV IN (8" PVC) = 519.79'  
INV IN (8" ABS) = 520.69'  
INV OUT (8" PVC) = 519.69'  
INV IN (10" PVC) = 519.79'  
REMOVE OLD SEWER PIPE AND CORE  
NEW HOLE TO INSTALL NEW SDR-35  
PVC SEWER. THIS WORK SHALL BE  
PAID FOR UNDER ITEM 604.418  
REHAB. DROP INLETS, CATCH BASINS,  
OR MANHOLES, CLASS III

EXIST. MH (WET WELL)  
RIM = 529.73'  
FLOOR = 516.33'

EXIST. MH (WET WELL)  
RIM = 529.71'  
FLOOR = 516.92'

MOTOR FLOOR  
ELEV. = 525.19'  
BOTTOM FLOOR  
ELEV. = 516.45'

6" FORCE MAIN APPROX.  
INV. ELEV. = 519.45'  
CONTRACTOR TO VERIFY

CONNECT NEW 6" FORCE MAIN TO  
EXISTING WITH SOLID SLEEVE COUPLING

TEMP. CONST. LIMITS (TYP.)

EXIST. SEWER OVER FLOW APPROX.  
INV. = 521.44'

CONTRACTOR TO VERIFY

POSSIBLE TRANSITE (AC) PIPE  
PER CITY OF RUTLAND GIS MAPPING

NOTES:

- CONTRACTOR TO REMOVE ALL EXISTING FENCE AND SWING GATE. INSTALL NEW CHAIN-LINK FENCE AND NEW 16' SLIDE GATE. SEE ROADWAY LAYOUTS. SUBMIT WORKING DRAWING FOR SLIDE GATE CONFIGURATION.
- REMOVE EXISTING OVERFLOW PIPE AND CLEANOUT AND INSTALL NEW 12" C-900 PVC OVERFLOW PIPE WITH NEW FLAPPER VALVE AND HEADWALL. MATCH PROFILE. CONNECT TO EXISTING PIPE WITH SOLID SLEEVE COUPLING APPROX. 2' TO 4' OUTSIDE WET WELL. SEE FLAPPER VALVE AND HEADWALL DETAIL.

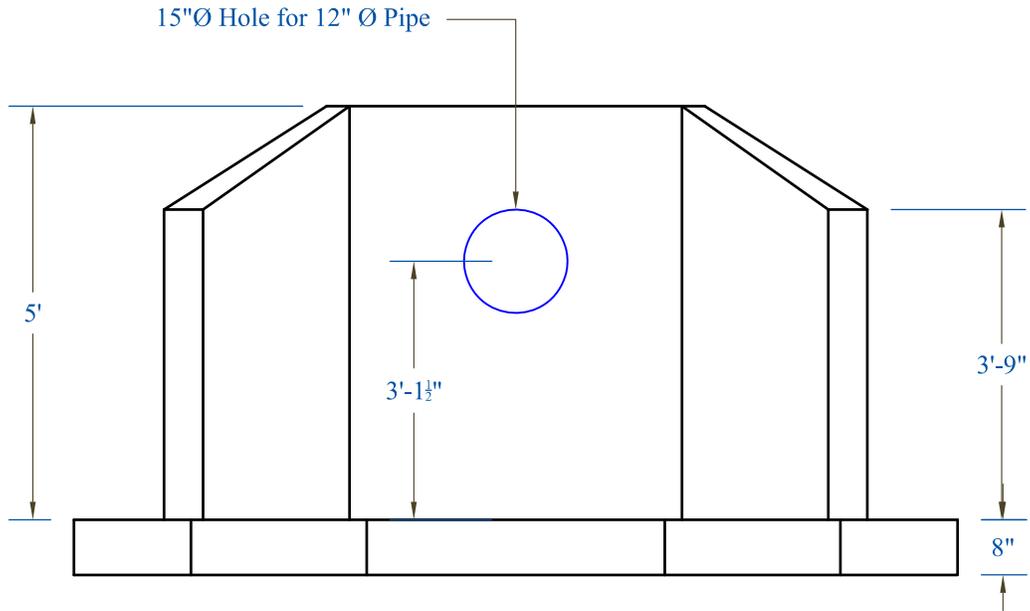
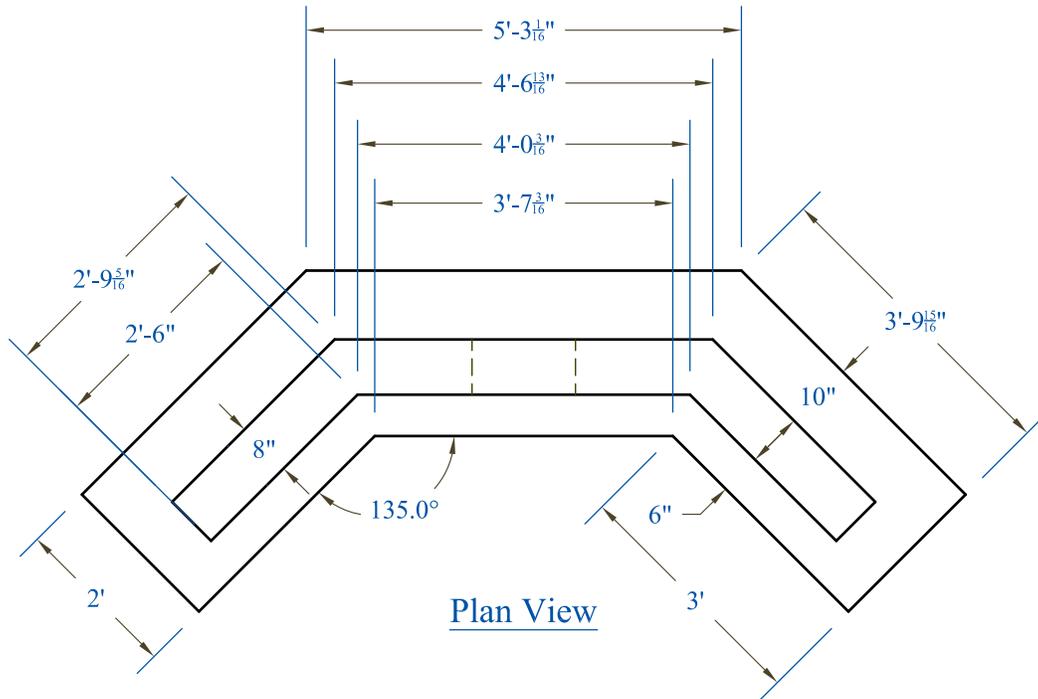
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**WATER AND SEWER PLANS**

**CDL CONSULTING ENGINEERS**  
540 Commercial Street, Manchester, NH 03101  
(603) 668-8223 • Fax (603) 668-8802  
cdl@cdlengineers.com • www.cdlengineers.com  
Maine • New Hampshire • Vermont

PROJECT NAME: RUTLAND CITY	PLOT DATE: 6/17/2014
PROJECT NUMBER: BRF 3000 (16)	DRAWN BY: W. GORDON
FILE NAME: z94j092bdrswr.dgn	CHECKED BY: S. REICHERT
PROJECT LEADER: C. BEAN	SHEET 14 OF 22
DESIGNED BY: D. LEWIS	
DORR DRIVE PUMP STATION PLAN	



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6800 lbs.

Job #: 15790  
 Company: Champlain Constr.  
 Project: River St. BRF3000(16)  
 Address: Rutland, VT  
 Date: 02/03/15  
 Scale: N.T.S.

Design Notes:  
 -Concrete Minimum 5000 psi at 28 days  
 -Grade 60 Steel Reinforcing

**Note:**  
This shop drawing represents S.D. Ireland's interpretation of the architects plans and specifications as well as our contract requirements for this project. Prior to manufacture and production from this drawing all dimensions, methods of construction, and existing conditions must be checked, revised and approved by S.D. Ireland's client.

**General Notes:**  
1) All lengths stated are actual lengths.  
2) All lengths stated to be verified in the field by others: -Not the responsibility of S.D. Ireland  
3) All loose anchorage to be supplied by others: -Not the responsibility of S.D. Ireland

**Legend:**

- Grade 60 blk rebar
- Concrete

**P50TER SCC for general precast**

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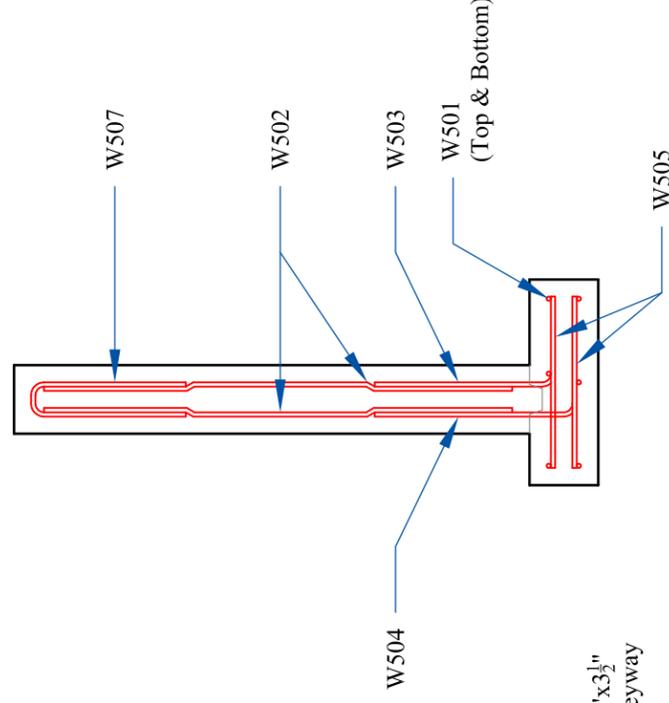
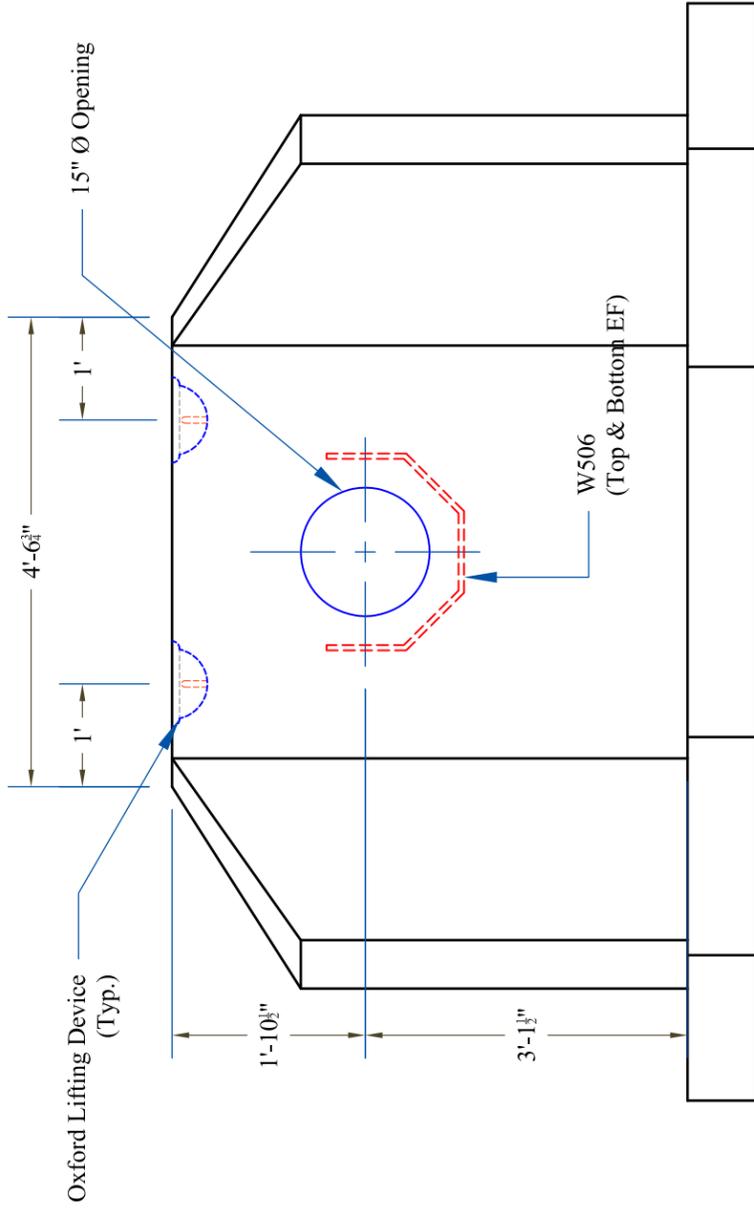
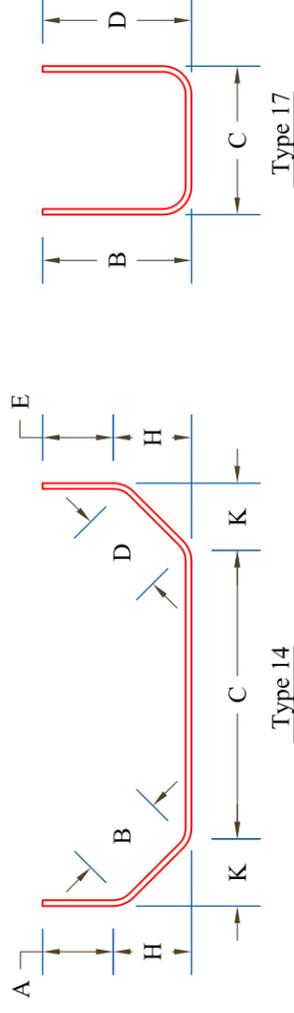
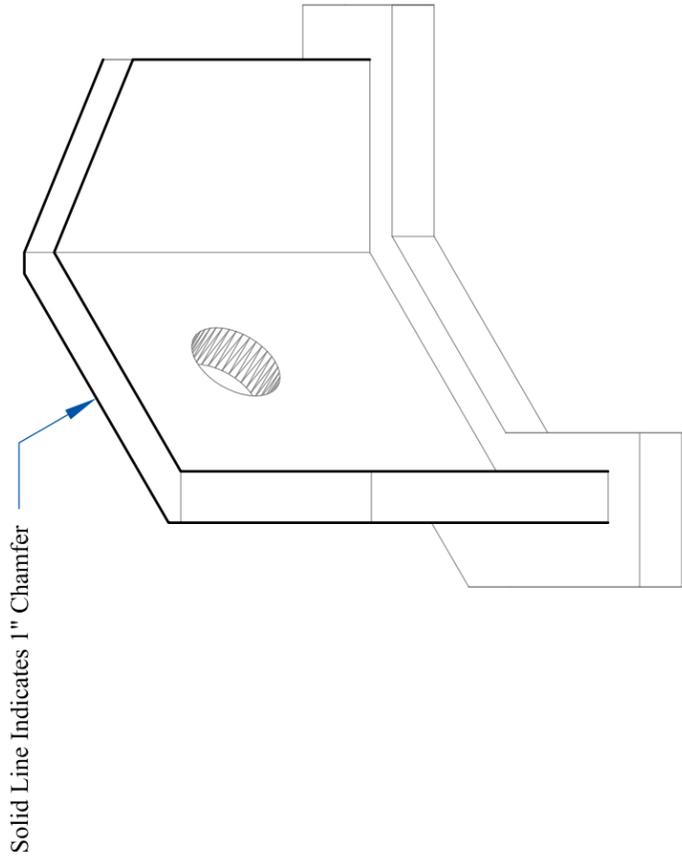
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Rev.	Date	By	Description

Project Name: Rutland BRF 3000(16)  
Project Location: Rutland, VT  
Drawing Title: Precast Headwall  
Job #: 15790 Date: 15790  
Scale: N.T.S. Page:

**Steel Schedule for Reinforced Concrete Headwall**

Mark	Size	Spacing	Length	Type	A	B	C	D	E	H	K
W501	#5	12"	Varies	Str.							
W502	#5	12"	Varies	Str.							
W503	#5	12"	2'-7 1/2"	17		1'-9"	10 1/2"				
W504	#5	12"	3'-1 1/2"	17		1'-11 1/2"	1'-2"				
W505	#5	12"	1'-8"	Str.				9"	9"	6 3/8"	6 3/8"
W506	#5	N/A	8'-0"	14	9"	2'-0"	4"	2'-0"			
W507	#5	12"	4'-4"	17							



**Elevation View**

**Section View**

**Rebar Reinforcing**

**CONCRETE MIX DESIGN**

**5000 psi**

**SCC**

**SDI MIX CODE: P50TER**

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**DATE:** April 08, 2015 **PLANT:** Burlington, VT

**PROJECT:** General DOT Precast - 2015

**FINE AGGREGATE:** ASTM C 33  
Source: Hinesburg Sand & Gravel  
Specific Gravity: 2.68 (Abs.: 1.25%)  
Fineness Modulus: 2.65 ±

**COARSE AGGREGATE:** ASTM C 33  
Source: S.D. Ireland, Brownell Quarry  
Specific Gravity: 2.77 (Abs.: 0.43%)  
Description: 3/4" 100% Crushed Stone (Size #67)

**CEMENT:** Ternary Blend Cement; Lefarge North America Lakes and Seaway Re St. Constant, Quebec (22% Slag, 5% Silica Fume, 73% Type II Cement) (Sp.Gvty: 2.976)

**ADMIXTURES:** Water Reducer (HRWR): Glenium 7500; BASF Admixtures  
Air Entraining Agent: Darex II AEA; Grace Concrete Chemicals

**CONSTITUENTS (LBS. /YD<sup>3</sup>)**

		Abs.Vol.
Coarse Aggregate (SSD)	1660	9.60
Fine Aggregate (SSD)	1198	7.17
Cement	705	3.80
Water	292	4.68
Air Content (Entrained)	6.5%	1.76
Total	3855	27.00ft <sup>3</sup>

**MIX PROPERTIES/ REQUIREMENTS**

Water Cement Ratios: 0.41 (0.44 max)  
Entrained Air Content: 5.0 % – 9.0%  
Dry Unit Weight: 143 ± pcf  
Spread: 21" to 27"  
Concrete Temperatures: 50 – 85°F  
VSI= ≤1

**ADMIXTURE(S) DOSEAGE (OZ. /YD<sup>3</sup>)**

Glenium 7500 (HRWR)	46 – 53
Darex II AEA	2.0

**RECENT STRENGTH GAIN**

See Separate Report

*Approved by James Wild, UACT  
Composite Materials Engineer 4/10/15*

\*Admixture dosage rates are subject to change.



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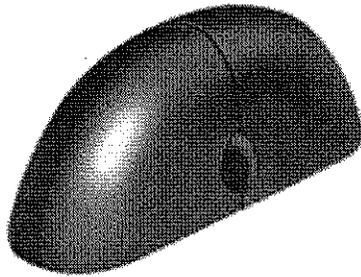
**Oxford Lift System®**

**B-500**  
Block Out

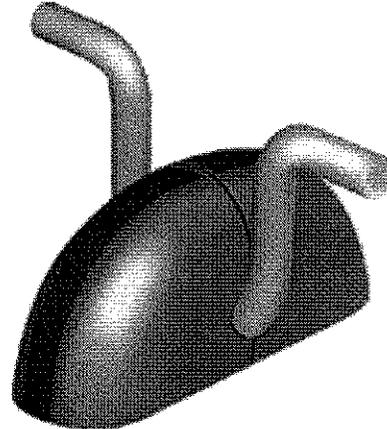
Makes a 7" L x 2"  
W x 3"H Void

**B-750**  
Block Out

Makes a 8" L x 3"  
W x 4"H Void



Patented



Patented

<back

next>

Home	B-500 & B-750	S-150	S-300	Lift Anchor & Order Form	Concrete Products
Pull Iron Capacity	Anchors & Accessories	Toggle-Lok	Insert/Lift Anchor	Grid-Lok/Rebar Chair	Helpful Calculations

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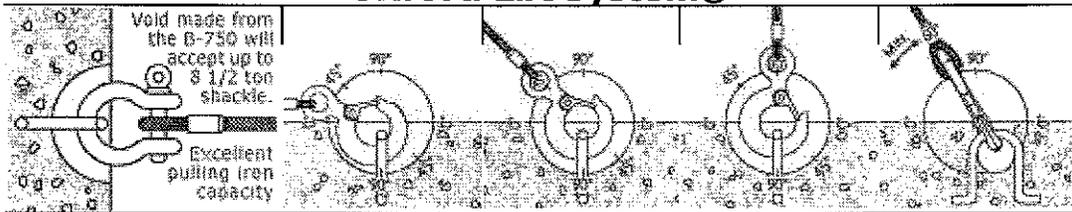
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**Oxford Lift System®**



Anchor Product Code	Slab Min. Inches	Safe Working Load @ 90 degree Shear-0 degree Pull	Safe Working Load @ 90 degree Shear-45 degree Pull	Safe Working Load @ 90 degree Tension-90 degree Pull	Safe Working Load @ 90 degree Shear-60 degree Pull
A 500-3	4.00"	4,500	4,000	3,500	4,000
A 500-4	5.00"	8,000	5,500	4,000	5,000
A 500-5	6.00"	10,500	6,500	5,000	5,500
A 750-5	6.00"	12,500	8,000	7,000	7,000
A 750-7	8.00"	15,000	12,500	10,000	10,000

Note: Safe Working Load provides a factor of safety of approximately 4:1

Test Results are based on a minimum concrete compressive strength of 4,000 psi.

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