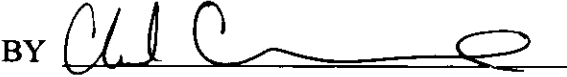


RECORD PLANS

| | |
|-----------------------|-----------------------------------|
| CONTRACTOR | RENAUD BROTHERS, INC - VERNON, VT |
| RESIDENT ENGINEER | CHAD GREENWOOD |
| CONSTRUCTION BEGAN | JANUARY 26, 2010 |
| CONSTRUCTION COMPLETE | AUGUST 28, 2010 |
| RECORD PLANS BY | CHAD GREENWOOD & M BIRCHARD |

I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN

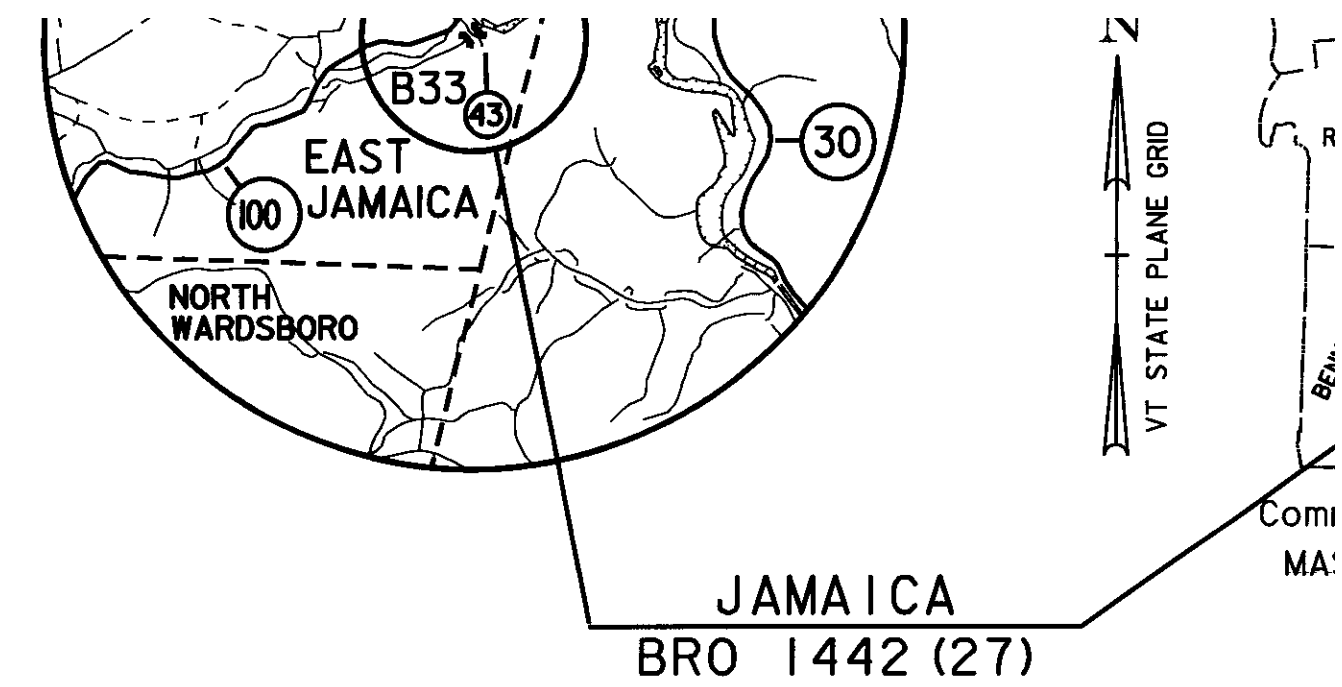
BY  RESIDENT ENGINEER

DATE MARCH 17, 2011

NOTE Any further information concerning final quantities, amounts or other details relative to this project may be found at Central Files in the electronic archives



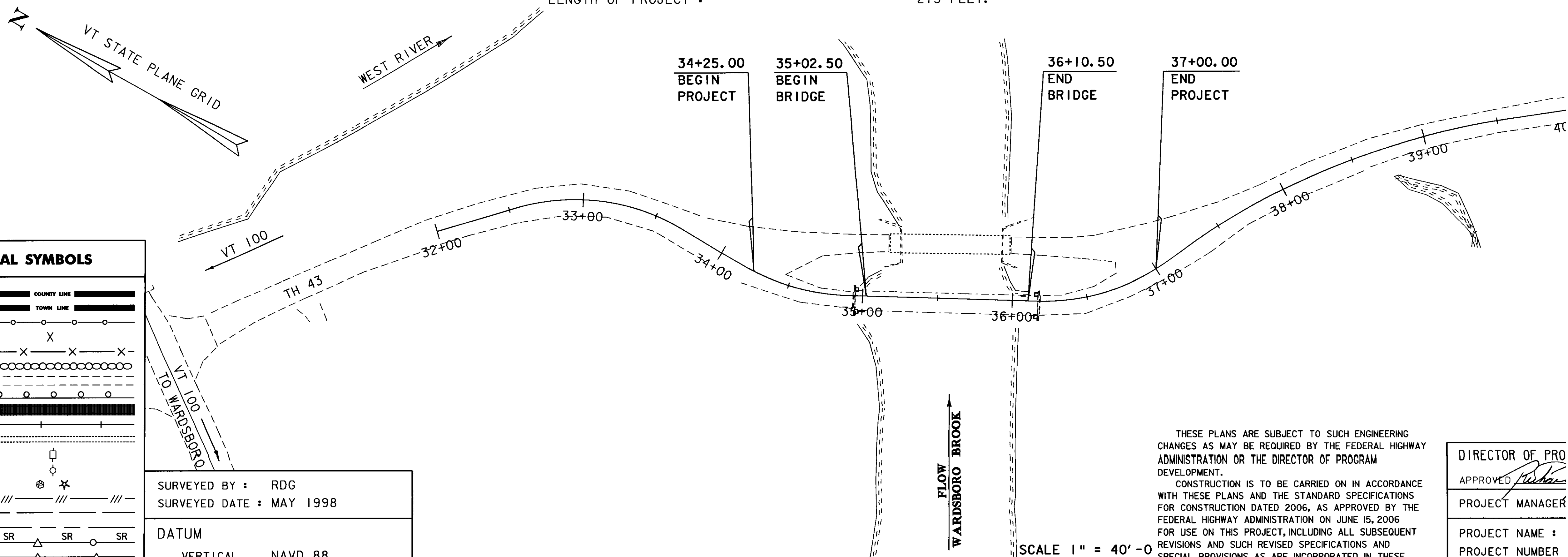
**PROPOSED IMPROVEMENT
BRIDGE PROJECT
TOWN OF JAMAICA
COUNTY OF WINDHAM**



ROUTE NO : TH 43 CLASS III, LOCAL ROAD BRIDGE NO : 33

PROJECT LOCATION : BRIDGE #33 IS LOCATED ON TOWN HIGHWAY 43 APPROXIMATELY 0.10 MILES SOUTH OF THE INTERSECTION WITH VT ROUTE 100.
PROJECT DESCRIPTION : REPLACEMENT OF EXISTING THRU TRUSS BRIDGE WITH A NEW INTEGRAL ABUTMENT STEEL GIRDER BRIDGE AND NECESSARY CHANNEL AND APPROACH WORK, AND REMOVAL OF EXISTING TEMPORARY BRIDGE AND APPROACHES.

LENGTH OF STRUCTURE : 108 FEET.
LENGTH OF ROADWAY : 167 FEET.
LENGTH OF PROJECT : 275 FEET.



CONVENTIONAL SYMBOLS

| | |
|--------------------|--|
| COUNTY LINE | |
| TOWN LINE | |
| LIMITS OF ACCESS | |
| POINT OF ACCESS | |
| FENCE LINE | |
| STONE WALL | |
| TRAVELED WAY | |
| GUARD RAIL | |
| RAILROAD | |
| SURVEY LINE | |
| CULVERT | |
| POWER POLE | |
| TELEPHONE POLE | |
| TREES | |
| CONTROL OF ACCESS | |
| PROPERTY LINE | |
| R.O.W. TAKING LINE | |
| SLOPE RIGHTS | |
| TOP OF CUT | |
| TOE OF SLOPE | |

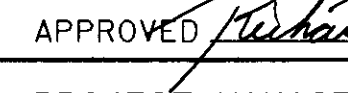
SURVEYED BY : RDG
SURVEYED DATE : MAY 1998

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT.
CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JUNE 15, 2006 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

SCALE 1" = 40'-0"

s96j068111e.1 PLOTTED 16-OCT-2009

DIRECTOR OF PRO
APPROVED 
PROJECT MANAGER

PROJECT NAME :
PROJECT NUMBER
SHEET 1 OF

PRELIMINARY INFORMATION SHEET (BRIDGE)

LRFD

INDEX OF SHEETS

PLAN SHEETS

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STANDARDS LIST

| | | |
|--------|---|-----------|
| E-5 | EMBANKMENT ON EARTH SLOPE; EMBANKMENT ON ROCK SLOPE; MUCK EDC | 1-Jan-04 |
| E-100 | CONSTRUCTION APPROACH SIGNS | 2-Jan-04 |
| E-100A | SIDE ROAD CONSTRUCTION - APPROACH SIGNS | 2-Jan-04 |
| E-101 | CONSTRUCTION SIGNS | 30-May-03 |
| E-102 | CONSTRUCTION SIGN DETAILS | 30-Jan-03 |
| E-102A | CONSTRUCTION SIGN DETAILS | 18-May-04 |
| E-107 | DELINEATION, BARRICADES AND DETOURS FOR CONSTRUCTION AREAS | 30-Jan-03 |
| E-107A | BREAKAWAY BARRICADE DETAILS | 8-Jan-09 |
| E-108 | CONSTRUCTION ZONE LONGITUDINAL DROP OFFS | 8-Jan-09 |
| E-110 | MAJOR MAINTENANCE OPERATION LANE CLOSURE | 8-Aug-05 |
| E-121 | STANDARD SIGN PLACEMENT - CONVENTIONAL ROAD | 8-Aug-05 |
| E-134 | BRIDGE NUMBER PLaque | 8-Aug-05 |
| E-160 | FLANGED CHANNEL STEEL SIGN POST | 20-May-09 |
| G-1B | BOX-BEAM GUARD RAIL | 1-Jan-04 |

FINAL HYDRAULIC REPORT

TOWN: Jamaica COUNTY: Windham
PROJECT #: BRO 1442(27) STREAM: Wardsboro Brook
HIGHWAY #: TH43 STRUCTURE #: BR 33

HYDROLOGIC DATA
DRAINAGE AREA: 35.1 sq. mi.
CHARACTER OF TERRAIN: Hilly to mountainous, mostly forested
STREAM CHARACTERISTICS: Sinusoidal, narrow to wide floodplain
NATURE OF STREAMBED: Cobbles and gravel

PEAK FLOW DATA
Q 2.33 = 1900 cfs Q 50 = 8600 cfs
Q 10 = 4800 cfs Q 100 = 10,600 cfs
Q 25 = 6800 cfs Q 500 = 16,200 cfs

DATE OF FLOOD OF RECORD: 1859, 1927, 1938, 1976
ESTIMATED DISCHARGE: unknown
WATER SURFACE ELEV.: unknown
NATURAL STREAM VELOCITY: @ Q25 = 12.0 fps
ICE CONDITIONS: moderate
DEBRIS: little
DOES THE STREAM REACH MAXIMUM HIGH WATER ELEV. RAPIDLY? no
IS ORDINARY RISE RAPID? no
IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? yes
IF YES, DESCRIBE: backwater from West River

WATERSHED STORAGE: _____ HEADWATERS: _____
UNIFORM: X
IMMEDIATELY ABOVE SITE: _____

EXISTING STRUCTURE INFORMATION
STRUCTURE TYPE: Truss bridge and Temporary Mabey Bridge
YEAR BUILT: 1936 for truss, unknown for temporary
CLEAR SPAN(NORMAL TO STREAM): 117 for truss, 66 for temporary
VERTICAL CLEARANCE ABOVE STREAMBED: 12' - Avg. bottom of beam @ 554.7'
WATERWAY OF FULL OPENING: 730 sq. ft. with temporary bridge

DISPOSITION OF STRUCTURE: Removal
TYPE OF MATERIAL UNDER SUBSTRUCTURE: Refer to boring logs.

WATER SURFACE ELEVATIONS AT:
Q2.33 = 549.0' VELOCITY = 7.5 fps
Q10 = 562.0' " " 12.6 fps
Q25 = 553.7' " " 14.0 fps
Q50 = 554.7' " " 14.0 fps
Q100 = 555.0' " " 11.3 fps

LONG TERM STREAMBED CHANGES: None noted

IS THE ROADWAY OVERTOPPED BELOW Q100: Yes
FREQUENCY: Q25
RELIEF ELEVATION: 553.7'
DISCHARGE OVER ROAD @Q100: 3500 cfs

UPSTREAM STRUCTURE
TOWN: Jamaica DISTANCE: 1.2 miles
HIGHWAY #: VT 100 STRUCTURE #: BR 78
CLEAR SPAN: 2 @ 55' = 110' CLEAR HEIGHT: 12'
YEAR BUILT: 1937 - rehab 1975 FULL WATERWAY: 840 sq. ft.
STRUCTURE TYPE: 2-span steel beam

DOWNSTREAM STRUCTURE

| LRFD LOAD RATING FACTORS | | | | | | |
|--------------------------|-------|-------------|-------------|-------------|-------------|-------------|
| LOADING LEVELS | TRUCK | | | | | |
| | H20 | H6-36 | SS2 | SA S16 | SA S18 | SA S20 |
| TORNIAGE | | 36 | 66 | 30 | 34.5 | 38 |
| INVENTORY | 2.01 | 1.09 | | | | |
| POSTING | | | | | | |
| OPERATING | 2.82 | 1.41 | 2.26 | 1.39 | 2.23 | 1.98 |
| COMMENTS: | | | | | | |

PILE DRIVING AND TESTING REQUIREMENTS
1. NOMINAL PILE DRIVING CAPACITY: 550,000 KIP
2. PILE TEST RESISTANCE FACTOR: 0.85
3. MAXIMUM PILE TIP ELEVATION: 517 FT
4. 0

HIGHWAY #: _____ STRUCTURE #: _____
CLEAR SPAN: _____ CLEAR HEIGHT: _____
YEAR BUILT: _____ FULL WATERWAY: _____
STRUCTURE TYPE: _____

PROPOSED STRUCTURE
STRUCTURE TYPE: Steel girder bridge
CLEAR SPAN(NORMAL TO STREAM): 114'
VERTICAL CLEARANCE ABOVE STREAMBED: 11'
WATERWAY OF FULL OPENING: 920 sq. ft.

WATER SURFACE ELEVATIONS AT:
Q2.33 = 549.0' VELOCITY = 6.6 fps
Q10 = 551.9' " " 9.5 fps
Q25 = 553.1' " " 12.2 fps
Q50 = 555.0' " " 8.2 fps
Q100 = 555.0' " " 9.4 fps

IS THE ROADWAY OVERTOPPED BELOW Q100: Yes
FREQUENCY: below Q50
RELIEF ELEVATION: 553.5'
DISCHARGE OVER ROAD @Q100: 2000 cfs

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 554.2'
VERTICAL CLEARANCE: @ Q25 = 1.1'

SCOUR: Contraction scour at Q500 = 3.0'

REQUIRED CHANNEL PROTECTION: Stone Fill, Type II

PERMIT INFORMATION
AVERAGE DAILY FLOW: 70 cfs DEPTH OR ELEVATION: _____
ORDINARY LOW WATER: 35 cfs 1.5'
ORDINARY HIGH WATER: 820 cfs 3.7'

TEMPORARY BRIDGE REQUIREMENTS
STRUCTURE TYPE: Mabey Bridge already in place
CLEAR SPAN(NORMAL TO STREAM): 66'
VERTICAL CLEARANCE ABOVE STREAMBED: 12'
WATERWAY AREA OF FULL OPENING: 730 sq. ft.

ADDITIONAL INFORMATION
TRAFFIC MAINTENANCE NOTES
1. MAINTAIN ONE-WAY TRAFFIC ON THE EXISTING TEMPORARY MABEY BRIDGE
2. TRAFFIC SIGNALS ARE NOT NECESSARY.
3. SIDEWALKS ARE NOT NECESSARY.

| DESIGN VALUES | |
|--|--------------------------------|
| 1. DESIGN LIVE LOAD | HL93 |
| 2. FUTURE PAVEMENT | d ₉ = 3.0 INCH |
| 3. DESIGN SPAN | L = 105.00 FT |
| 4. MIN. MID-SPAN POS. CAMBER @ RELEASE (PRESTRESSED UNITS) | Δ = --- |
| 5. PRESTRESSING STRAND | f _y = --- |
| 6. PRESTRESSED CONCRETE STRENGTH | f _c = --- |
| 7. PRESTRESSED CONCRETE RELEASE STRENGTH | f _{cr} = --- |
| 8. CONCRETE HIGH PERFORMANCE CLASS AA | f _c = 4.0 KSI |
| 9. CONCRETE HIGH PERFORMANCE CLASS A LOW CEMENT | f _c = 4.0 KSI |
| 10. CONCRETE HIGH PERFORMANCE CLASS B | f _c = 3.5 KSI |
| 11. CONCRETE CLASS C | f _c = 3.0 KSI |
| 12. REINFORCING STEEL | f _y = 60 KSI |
| 13. STRUCTURAL STEEL AASHTO M270/M270 | f _y = 50 KSI |
| 14. SOIL UNIT WEIGHT | γ = 0.140 KCF |
| 15. NOMINAL BEARING RESISTANCE OF SOIL | q _n = --- |
| 16. SOIL BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD) | f = --- |
| 17. NOMINAL BEARING RESISTANCE OF ROCK | q _n = --- |
| 18. ROCK BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD) | f = --- |
| 19. NOMINAL AXIAL PILE RESISTANCE | q _p = --- |
| 20. PILE YIELD STRENGTH ASTM A572 | f _y = --- |
| 21. PILE SIZE | HP 12X 84 |
| 22. EST. PILE LENGTHS (TWO SUBSTRUCTURES) | L _p = --- |
| (ABUTMENT 1 = 42 AND ABUTMENT 2 = 47) FT | |
| 23. PILE RESISTANCE FACTOR | f = --- |
| 24. LATERAL PILE DEFLECTION | Δ = --- |
| 25. BASIC WIND SPEED | V = 36 -- |
| 26. MINIMUM GROUND SNOW LOAD | p _g = --- |
| 27. SEISMIC DATA | PGA = --- S ₁ = --- |

PROJECT NAME: JAMAICA

PROJECT NUMBER: BRO 1442(27)

FILE NAME: s99688qs.xls PLOT DATE: 10/16/2009
PROJECT LEADER: K. HIGGINS DRAWN BY: P. PELLET
DESIGNED BY: J. LACROIX CHECKED BY: J. LACROIX

PRELIMINARY INFORMATION SHEET 1 SHEET 2 OF 44

TRAFFIC DATA

| YEAR | ADT | DHV | % D | % T | ADTT | 20 year ESAL for flexible pavement from 2002 to 2022 : N/A | 40 year ESAL for flexible pavement from 2002 to 2042 : N/A |
|------|-----|-----|-----|-----|------|--|--|
| 2002 | 100 | <10 | 0 | 50 | 50 | | |
| 2022 | 100 | <10 | 0 | 50 | 50 | Design Speed: 20 mph | |

GENERAL

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006, AND ITS LATEST REVISIONS, AND THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 4TH EDITION, DATED 2007 AND ITS LATEST REVISIONS.
2. THE BRIDGE IS DESIGNED FOR HL 93 LIVE LOAD WITH AN ALLOWANCE FOR 2" OF FUTURE PAVEMENT.
3. ALL DIMENSIONS SHOWN IN THE PLANS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 68 DEGREES FAHRENHEIT UNLESS OTHERWISE NOTED.
4. THE AREA DISTURBED BY THE EXISTING TEMPORARY BRIDGE SHALL BE SEEDED AND MULCHED AFTER ALL OF THE FILL IS REMOVED AS SHOWN ON THE CROSS SECTIONS. THE COST OF THE SEED, FERTILIZER, AND MULCH WILL BE PAID FOR UNDER THEIR RESPECTIVE ITEMS.
5. THE STONE FILL, TYPE III SHALL BE PLACED IN FRONT OF THE ABUTMENTS BEFORE THE STRUCTURAL STEEL HAS BEEN SET.
6. DURING CONSTRUCTION, TRAFFIC SHALL BE MAINTAINED ON A ONE-WAY TEMPORARY BRIDGE CONSTRUCTED DOWNSTREAM OF THE PROPOSED STRUCTURE. THE TEMPORARY BRIDGE IS ALREADY IN PLACE. MAINTENANCE OF THE TEMPORARY BRIDGE AND ITS APPROACHES SHALL BE PAID FOR UNDER ITEM 527.10. MAINTENANCE OF STRUCTURES AND APPROACHES. REMOVAL OF THE EXISTING TEMPORARY BRIDGE AND SUBSTRUCTURE UNITS WILL BE PAID FOR UNDER ITEM 529.15 REMOVAL OF STRUCTURE.

CONCRETE

7. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1 INCH BY 1 INCH.
8. JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
9. REINFORCING PLACEMENT TOLERANCES SHALL BE:
SPACING +/- 1 INCH
CLEARANCE +/- 1/4 INCH
10. THE DECK AND SUBSTRUCTURE CONCRETE ABOVE THE CONSTRUCTION JOINT SHALL BE SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS A LOW CEMENT).
11. WATER REPELLENT, SILANE SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES EXCEPT THE UNDERSIDE OF THE DECK BETWEEN THE DRIP NOTCHES.
12. ALL ABUTMENT CONCRETE ABOVE THE CONSTRUCTION JOINT SHALL BE PLACED MONOLITHICALLY WITH THE DECK.
13. THE SUBSTRUCTURE CONCRETE BELOW THE JOINT SHALL BE CONCRETE, HIGH PERFORMANCE CLASS B.
14. THE TOP SURFACE OF THE PILE CAP SHALL INITIALLY BE GIVEN A FLOAT FINISH TO GRADE. THE CONCRETE WITHIN THE REINFORCING CAGE SHALL THEN BE ROUGHENED BY RAKING PARALLEL TO THE FACE OF THE ABUTMENT TO AN AMPLITUDE OF 1/8 INCH. THE CONCRETE OUTSIDE THE REINFORCING CAGE AND UNDER THE BEARING PADS SHALL REMAIN SMOOTH.
15. IN ACCORDANCE WITH SUBSECTION 506.23 (a) OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE RESIDENT ENGINEER, THE CONTRACTOR SHALL TAKE MEASURES NECESSARY TO PROTECT ALL SUBSTRUCTURE CONCRETE FROM STAINING DUE TO OXIDE FORMATION ON THE STRUCTURAL STEEL PRIOR TO PLACEMENT OF THE DECK. THESE MEASURES WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO ITEM 501.34 "CONCRETE, HIGH PERFORMANCE CLASS B". ANY SUCH STAINING THAT OCCURS PRIOR TO DECK PLACEMENT SHALL BE REMOVED AT NO ADDITIONAL COST TO THE STATE.

STRUCTURAL STEEL

16. THE EXISTING STRUCTURAL STEEL IS PAINTED WITH A MATERIAL THAT MAY CONTAIN LEAD. THE CONTRACTOR SHALL FOLLOW ALL APPLICABLE REGULATIONS WHEN HANDLING AND WORKING WITH THIS STEEL. THE REMOVED STRUCTURAL STEEL IS THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE STATE, ITS OFFICERS, AND EMPLOYEES HARMLESS CONCERNING THE CONTRACTOR'S USE OR DISPOSITION OF THE REMOVED EXISTING STRUCTURAL STEEL.
17. ALL STRUCTURAL STEEL SHALL BE GRADE 50W CONFORMING TO SUBSECTION 714.03 AND SHALL BE DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC).

18. STRUCTURAL STEEL MEMBERS DESIGNATED AS "FCM" (FRACTURE CRITICAL MEMBER) IN PLANS SHALL MEET THE FOLLOWING CONSTRUCTION AND TESTING REQUIREMENTS:

- A. MEMBERS SHALL BE IMPACT TESTED TO THE FRACTURE CRITICAL REQUIREMENTS AS ALL FRACTURE CRITICAL MEMBERS SHALL BE FABRICATED ACCORDING TO SECTION 12 OF THE AASHTO/AWS D1.5M/D1.5 BRIDGE.
- B. ALL FRACTURE CRITICAL MEMBERS SHALL BE FABRICATED IN A PLANT HAVING AN AISC FRACTURE CRITICAL ENDORSEMENT OR THE FABRICATOR SHALL PROVIDE TO THE STRUCTURES ENGINEER PRIOR TO FABRICATION AN ACCEPTABLE FRACTURE CONTROL PLAN MEETING THE REQUIREMENTS OF AASHTO/AWS D1.5.
- C. ALL FRACTURE CRITICAL SPECIFIED IN AASHTO M270M/M270.

19. ALL WELDING SHALL CONFORM TO THE PROVISIONS OF SUBSECTION 506.10 "WELDING".
20. ANY BOLT HOLES IN THE WEBS OF THE FASCIA GIRDERS NOT OTHERWISE FILLED SHALL BE FILLED WITH EITHER BUTTON HEAD OR HEX HEAD BOLTS CONFORMING TO AASHTO M164 TYPE 3. THE BOLTS SHALL BE TIGHTENED IN ACCORDANCE WITH SUBSECTION 506.19 OF THE STANDARD SPECIFICATIONS.
21. ALL FIELD CONNECTIONS SHALL BE MADE WITH 7/8 INCH DIAMETER BOLTS CONFORMING TO AASHTO M164 TYPE 3 IN 15/16 INCH DIAMETER HOLES PER 506.19(a). ANY CONNECTIONS NOT DETAILED ON THE PLANS SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE STRUCTURES ENGINEER FOR APPROVAL.
22. FLEMING BRACKETS OR SIMILAR FALSEWORK SHALL BE SPACED AS REQUIRED BY DESIGN, BUT SHALL BE LIMITED TO A MAXIMUM SPACING OF 4 FEET AND SHALL BEAR AT THE BOTTOM QUARTER OF THE GIRDER AND BE ATTACHED TO THE TOP FLANGE. THE DESIGN OF THE FALSEWORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

PILES

23. THE PILES SHALL BE HP 12X84.
24. THE PILES SHALL BE EMBEDDED IN THE GROUND A MINIMUM OF 30 FEET AND BE DRIVEN TO A NOMINAL RESISTANCE OF 550 KIP. TO PREVENT DAMAGE TO THE PILES, PILE SHOES SHALL BE REQUIRED AND SHALL CONFORM TO SECTION 505.
25. ALL PILES SHALL HAVE A DYNAMIC LOAD TEST. IF THE MINIMUM PILE LENGTH CAN NOT BE ACHIEVED, OR IF THE DYNAMIC LOAD TEST INDICATES AN UNACCEPTABLE AMOUNT OF PILE DAMAGE, AS DETERMINED BY THE ENGINEER, THEN THE PILE SHALL BE PULLED. THE CONTRACTOR SHALL THEN EXCAVATE TO THE MINIMUM TIP ELEVATION AND REDRIVE THE PILE. THIS WORK SHALL BE PAID FOR UNDER ITEM 503.20 PRE-EXCAVATION OF INTEGRAL ABUTMENT PILES. THE MAXIMUM DEPTH OF THE EXCAVATION SHALL BE 30 FEET.
26. FOR ESTIMATING PURPOSES, THE PILE TIP ELEVATIONS WERE ASSUMED AS SHOWN ON THE BORING LOGS. THE ACTUAL IN PLACE LENGTHS MAY VARY.

TRAFFIC CONTROL

27. AS PART OF 900.645 SPECIAL PROVISION (TRAFFIC CONTROL, ALL INCLUSIVE), THE CONTRACTOR SHALL SUBMIT A SITE SPECIFIC TRAFFIC CONTROL PLAN TO THE ROADWAY, TRAFFIC, AND SAFETY ENGINEER FOR APPROVAL PER SUBSECTION 105.03. SEE SPECIAL PROVISIONS.
28. ALL ITEMS REQUIRED TO IMPLEMENT THE CONTRACTOR'S TRAFFIC CONTROL PLAN WILL NOT BE PAID FOR DIRECTLY BUT WILL BE INCLUDED IN THE BID PRICE FOR ITEM 900.645 SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE). THIS INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING

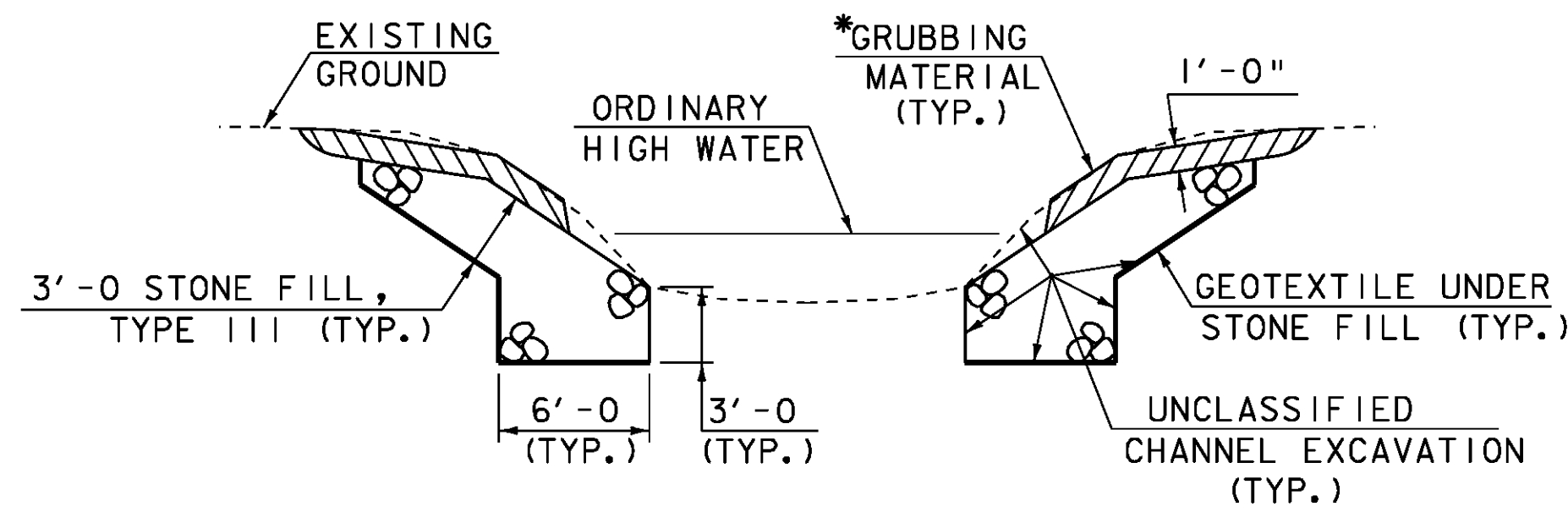
ITEMS: TEMPORARY TRAFFIC BARRIER
FLAGGERS
CONSTRUCTION SIGNING
29. FOR ADDITIONAL SIGNING INSTRUCTIONS SEE STANDARDS E-100, E-100A, E-107 & E-107A.

PROJECT NAME: JAMAICA
PROJECT NUMBER: BRO 1442(27)

FILE NAME: e961068gen.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. LACROIX
GENERAL NOTES

PLOT DATE: 03-NOV-2009
DRAWN BY: R. PELLETT
CHECKED BY: J. LACROIX
SHEET 3 OF 44

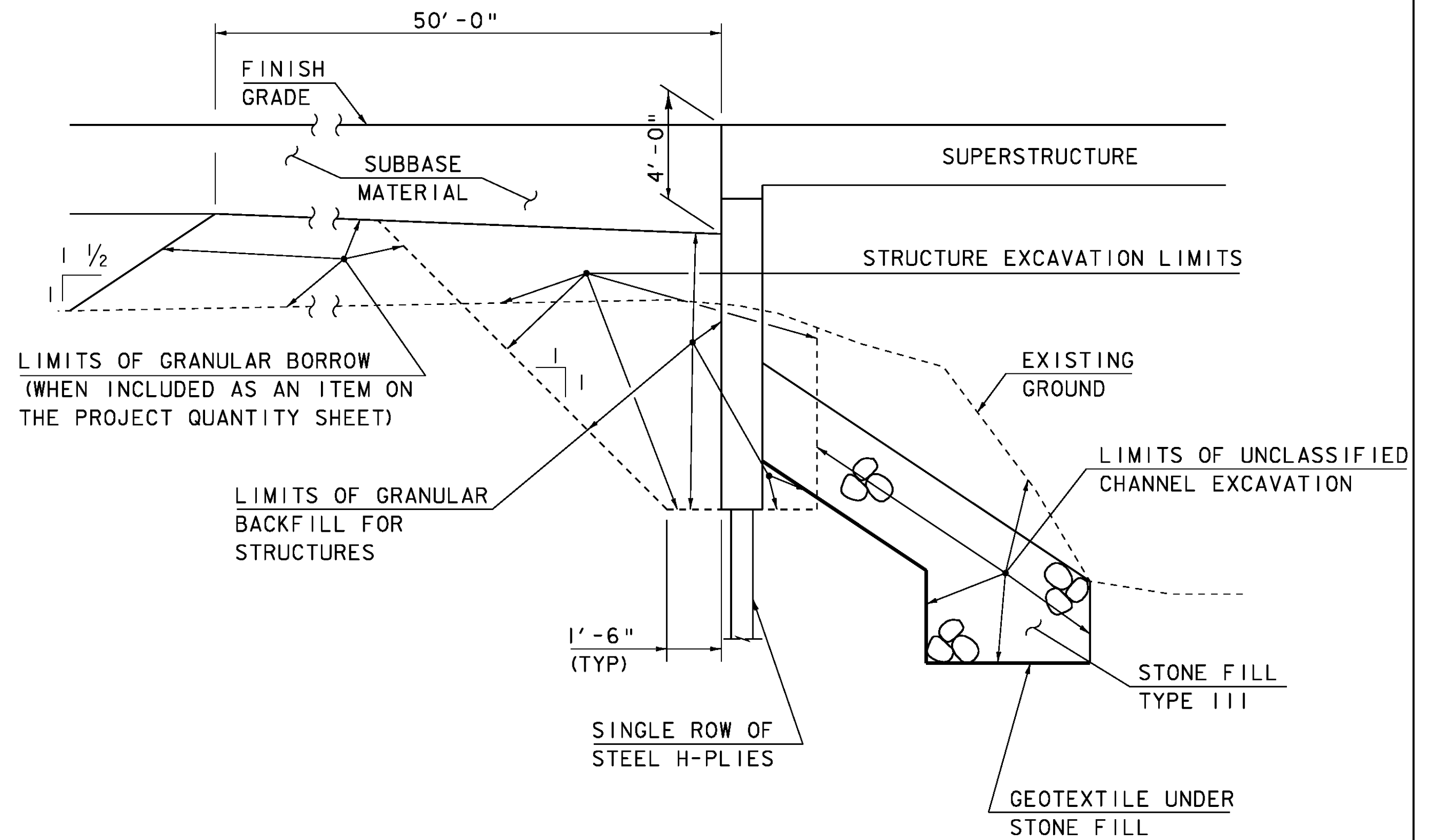
| MATERIAL ITEM | TOLERANCE |
|--------------------------|-----------|
| AGGREGATE SURFACE COURSE | ± 1/2" |
| SUBBASE | ± 1" |



TYPICAL CHANNEL SECTION

(NOT TO SCALE)

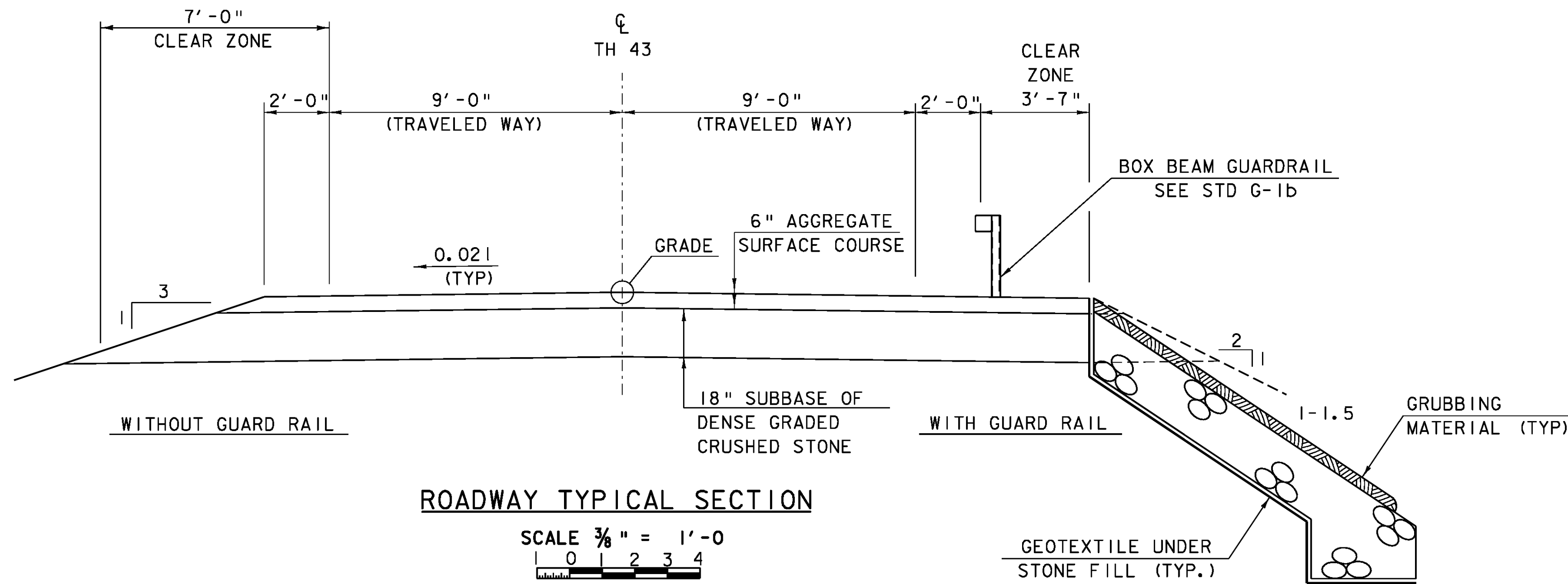
* GRUBBING MATERIAL SHALL NOT BE PLACED ON THE STONE FILL IN THE AREA UNDER THE BRIDGE. WHENEVER CHANNEL SLOPE INTERSECTS ROADWAY SUBBASE, GRUBBING MATERIAL SHALL BEGIN AT THE BOTTOM OF SUBBASE.



TYPICAL INTEGRAL ABUTMENT SECTION

(NOT TO SCALE)

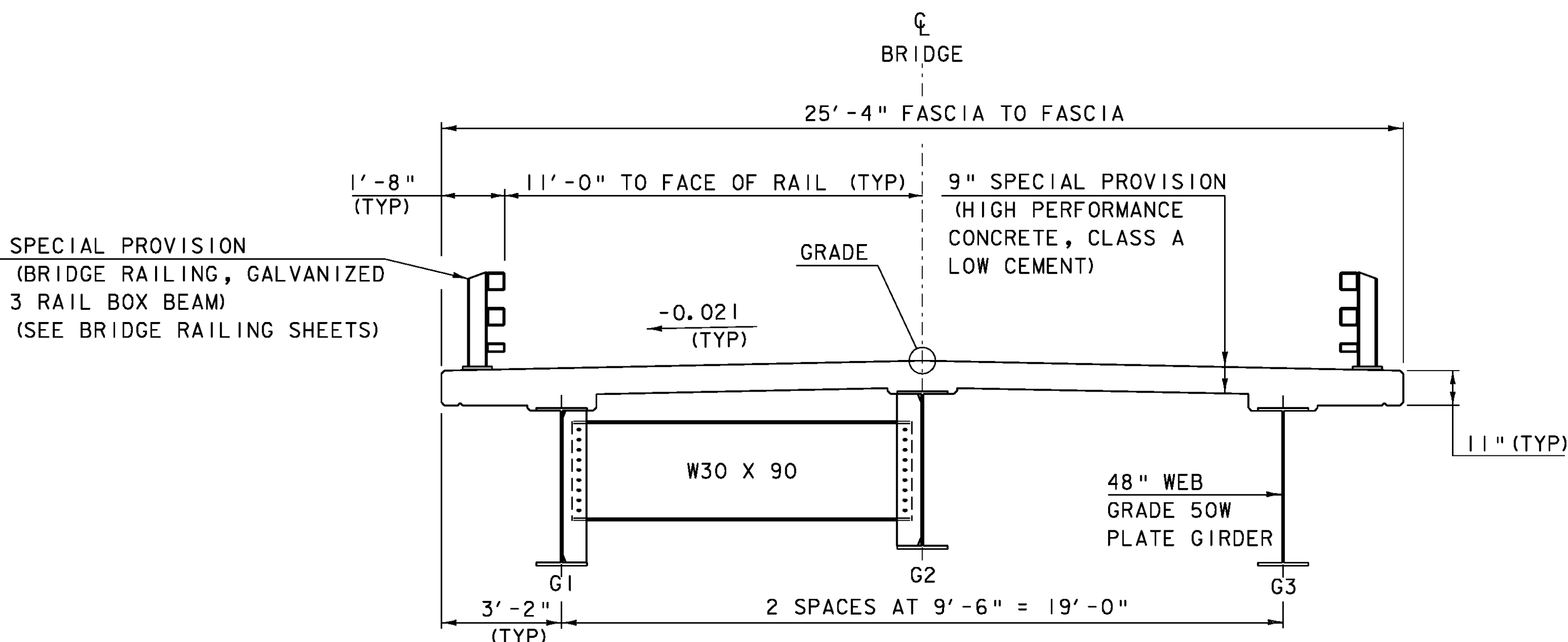
ACTUAL LIMITS OF STRUCTURE EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR. HOWEVER, ONLY THE EXCAVATION BETWEEN THE LIMITS SHOWN WILL BE PAID FOR UNDER ITEM 204.25 "STRUCTURE EXCAVATION". EXCAVATION BY THE CONTRACTOR OUTSIDE OF THESE LIMITS WILL BE AT THE EXPENSE OF THE CONTRACTOR.



ROADWAY TYPICAL SECTION

SCALE 3/8" = 1'-0"

NOTE:
ALL SLOPES STEEPER THAN 1-2 SHALL HAVE A 2' BLANKET OF STONE FILL, TYPE II. THE STONE FILL BLANKET SHALL BE COVERED WITH A 1' LAYER OF GRUBBING MATERIAL, FERTILIZED, LIMESTONED, SEEDED AND MULCHED.



BRIDGE TYPICAL SECTION

SCALE 3/8" = 1'-0"

| | |
|------------------------------|------------------------|
| PROJECT NAME: JAMAICA | PLOT DATE: 19-OCT-2009 |
| PROJECT NUMBER: BRO 1442(27) | DRAWN BY: R. PELLETT |
| FILE NAME: s961068typ.dgn | CHECKED BY: J. LACROIX |
| PROJECT LEADER: K. HIGGINS | SHEET 4 OF 44 |
| DESIGNED BY: J. LACROIX | |
| TYPICAL SECTIONS | |

QUANTITY SHEET 1

| SUMMARY OF ESTIMATED QUANTITIES | | | | | | | | | | TOTALS | | DESCRIPTIONS | | | DETAILED SUMMARY OF QUANTITIES | | | |
|---------------------------------|--|--|--|--|--|---------|-----------------|--------|---------------|-------------|-------|--------------|--|-------------|--------------------------------|------------|------|-------|
| | | | | | | ROADWAY | EROSION CONTROL | BRIDGE | FILL/CE ITEMS | GRAND TOTAL | FINAL | UNIT | ITEMS | ITEM NUMBER | ROUND | QUANTITIES | UNIT | ITEMS |
| | | | | | | 1 | | | | 1 | | LS | CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS | 201.10 | | | | |
| | | | | | | 1400 | | | | 1400 | | CY | COMMON EXCAVATION | 203.15 | | | | |
| | | | | | | | | 1420 | | 1420 | | CY | UNCLASSIFIED CHANNEL EXCAVATION | 203.27 | | | | |
| | | | | | | | | 140 | | 140 | | CY | STRUCTURE EXCAVATION | 204.25 | | | | |
| | | | | | | | | 200 | | 200 | | CY | GRANULAR BACKFILL FOR STRUCTURES | 204.30 | | | | |
| | | | | | | 650 | | | | 650 | | CY | SUBBASE OF DENSE GRADED CRUSHED STONE | 301.35 | | | | |
| | | | | | | 180 | | | | 180 | | CY | AGGREGATE SURFACE COURSE | 401.10 | | | | |
| | | | | | | | | 70 | | 70 | | CY | CONCRETE, HIGH PERFORMANCE CLASS B | 501.34 | | | | |
| | | | | | | | | 180 | | 180 | | LF | PRE-EXCAVATION OF INTEGRAL ABUTMENT PILES | 503.20 | | | | |
| | | | | | | | | 1 | | 1 | | LS | FURNISHING EQUIPMENT FOR DRIVING PILING | 504.10 | | | | |
| | | | | | | | | 270 | | 270 | | LF | STEEL PILING FOR INTEGRAL ABUTMENTS, HP 12 X 84 | 505.265 | | | | |
| | | | | | | | | 6 | | 6 | | EACH | DYNAMIC PILE LOADING TEST | 505.45 | | | | |
| | | | | | | | | 80100 | | 80100 | | LB | STRUCTURAL STEEL, PLATE GIRDER | 506.55 | | | | |
| | | | | | | | | 10480 | | 10480 | | LB | REINFORCING STEEL | 507.15 | | | | |
| | | | | | | | | 21350 | | 21350 | | LB | EPOXY COATED REINFORCING STEEL | 507.17 | | | | |
| | | | | | | | | 1 | | 1 | | LS | SHEAR CONNECTORS (64" X 7") | 508.15 | | | | |
| | | | | | | | | 100 | | 100 | | GAL | WATER REPELLENT, SILANE | 514.10 | | | | |
| | | | | | | 1 | | | | 1 | | LS | MAINTENANCE OF STRUCTURES AND APPROACHES | 527.10 | | | | |
| | | | | | | 1 | | | | 1 | | EACH | REMOVAL OF STRUCTURE (2300 SF - EST) | 529.15 | | | | |
| | | | | | | 1 | | | | 1 | | EACH | REMOVAL OF STRUCTURE 900 SF - EST. (TEMPORARY BRIDGE) | 529.15 | | | | |
| | | | | | | | | 6 | | 6 | | EACH | BEARING DEVICE ASSEMBLY, ELASTOMERIC PAD | 531.11 | | | | |
| | | | | | | | 1 | | | 1 | | MGAL | DUST CONTROL WITH WATER | 609.10 | | | | |
| | | | | | | 60 | | | | 60 | | CY | STONE FILL, TYPE II | 613.11 | | | | |
| | | | | | | 640 | | | | 640 | | CY | STONE FILL, TYPE II | 613.12 | | | | |
| | | | | | | 46 | | | | 46 | | LF | REMOVING AND RESETTING FENCE | 620.50 | | | | |
| | | | | | | 215 | | | | 215 | | LF | BOX BEAM GUARDRAIL | 621.30 | | | | |
| | | | | | | 238 | | | | 238 | | LF | REMOVAL AND DISPOSAL OF GUARDRAIL | 621.80 | | | | |
| | | | | | | | | | 1 | 1 | | LS | FIELD OFFICE, ENGINEERS | 631.10 | | | | |
| | | | | | | | | | 1 | 1 | | LS | TESTING EQUIPMENT, CONCRETE | 631.16 | | | | |
| | | | | | | 1 | | | | 1 | | LS | MOBILIZATION/DEMOLITION | 635.11 | | | | |
| | | | | | | | 800 | | | 800 | | SY | GEOTEXTILE UNDER STONE FILL | 649.31 | | | | |
| | | | | | | | 210 | | | 210 | | SY | GEOTEXTILE FOR SILT FENCE | 649.51 | | | | |
| | | | | | | | 80 | | | 80 | | SY | GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED | 649.515 | | | | |
| | | | | | | | 400 | | | 400 | | SY | GEOTEXTILE FOR FILTER CURTAIN | 649.61 | | | | |
| | | | | | | | 20 | | | 20 | | LB | SEED | 651.15 | | | | |
| | | | | | | | 100 | | | 100 | | LB | FERTILIZER | 651.18 | | | | |
| | | | | | | | 0.5 | | | 0.5 | | TON | AGRICULTURAL LIMESTONE | 651.20 | | | | |
| | | | | | | | 0.5 | | | 0.5 | | TON | HAYMULCH | 651.25 | | | | |
| | | | | | | | 500 | | | 500 | | SY | GRUBBING MATERIAL | 651.40 | | | | |
| | | | | | | | 1 | | | 1 | | LS | EPSC PLAN | 652.10 | | | | |

QUANTITY SHEET 2

| SUMMARY OF ESTIMATED QUANTITIES | | | | | | | | | | TOTALS | | DESCRIPTIONS | | | DETAILED SUMMARY OF QUANTITIES | | | |
|---------------------------------|--|--|--|--|--|---------|-----------------|--------|---------------|-------------|-------|--------------|--|-------------|--------------------------------|------------|------|-------|
| | | | | | | ROADWAY | EROSION CONTROL | BRIDGE | FULL CE ITEMS | GRAND TOTAL | FINAL | UNIT | ITEMS | ITEM NUMBER | ROUND | QUANTITIES | UNIT | ITEMS |
| | | | | | | | 50 | | | 50 | | HR | MONITORING EPSC PLAN | 652.20 | | | | |
| | | | | | | | 1 | | | 1 | | LU | MAINTENANCE OF EPSC PLAN (N.A.B.I.) | 652.30 | | | | |
| | | | | | | | 400 | | | 400 | | SY | TEMPORARY EROSION MATTING | 653.20 | | | | |
| | | | | | | | 5 | | | 5 | | CY | TEMPORARY STONE CHECK DAM TYPE I | 653.25 | | | | |
| | | | | | | | 80 | | | 80 | | CY | VEHICLE TRACKING PAD | 653.35 | | | | |
| | | | | | | | 700 | | | 700 | | LF | BARRIER FENCE | 653.50 | | | | |
| | | | | | | 12 | | | | 12 | | EACH | DELINEATOR WITH STEEL POST | 676.10 | | | | |
| | | | | | | | | 125 | | 125 | | CY | SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS A LOW CEMENT) | 900.608 | | | | |
| | | | | | | | | | 3000 | 3000 | | DL | SPECIAL PROVISION (FIELD OFFICE TELEPHONE (N.A.B.I.)) | 900.615 | | | | |
| | | | | | | 4 | | | | 4 | | EACH | SPECIAL PROVISION (GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM) | 900.620 | | | | |
| | | | | | | | | 220 | | 220 | | LF | SPECIAL PROVISION (BRIDGE RAILING, GALVANIZED 3 RAIL BOX BEAM) | 900.640 | | | | |
| | | | | | | 1 | | | | 1 | | LS | SPECIAL PROVISION (TRAFFIC CONTROL, ALL INCLUSIVE) | 900.645 | | | | |

GPS CONTROL POINTS

HVCTRL #1

T 127 AZ MK
 NORTH = 209820.66
 EAST = 1578913.51
 ELEV. = 553.80

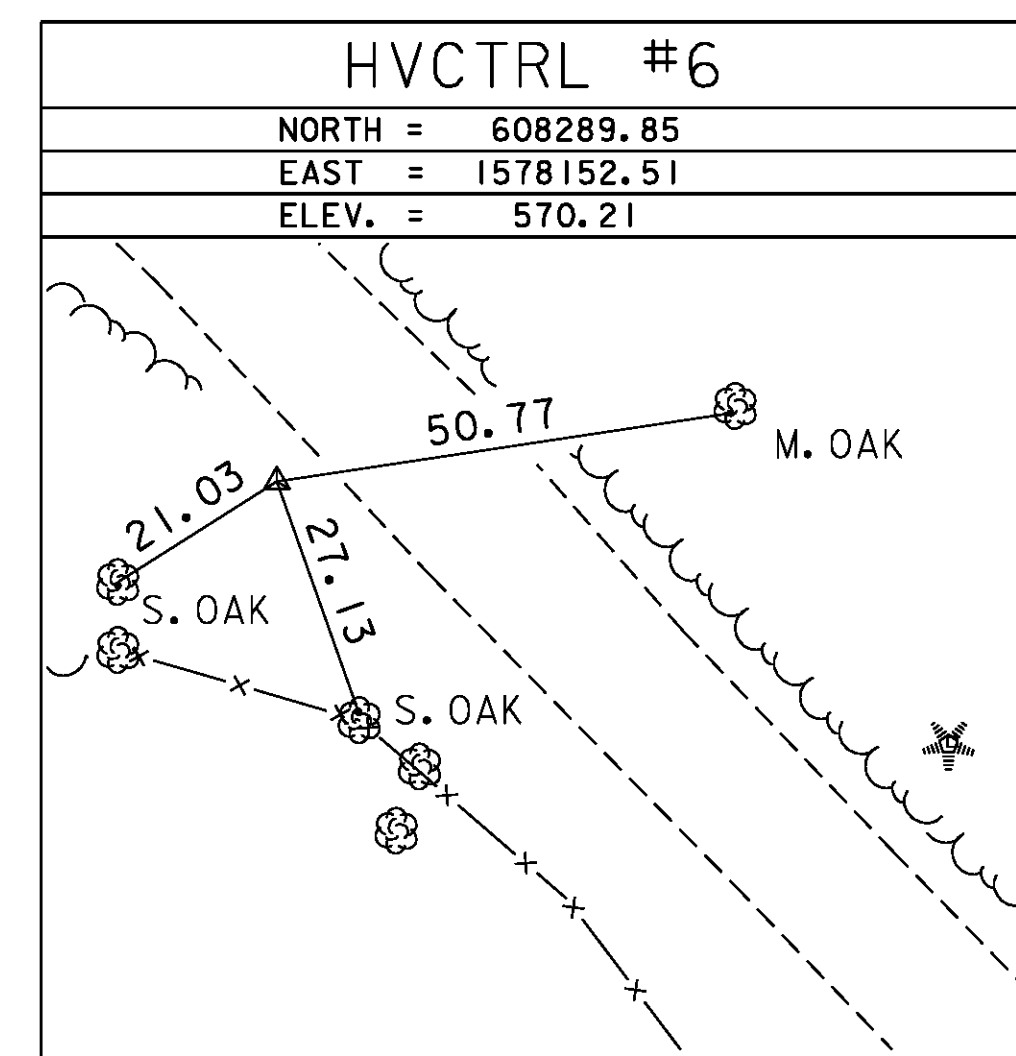
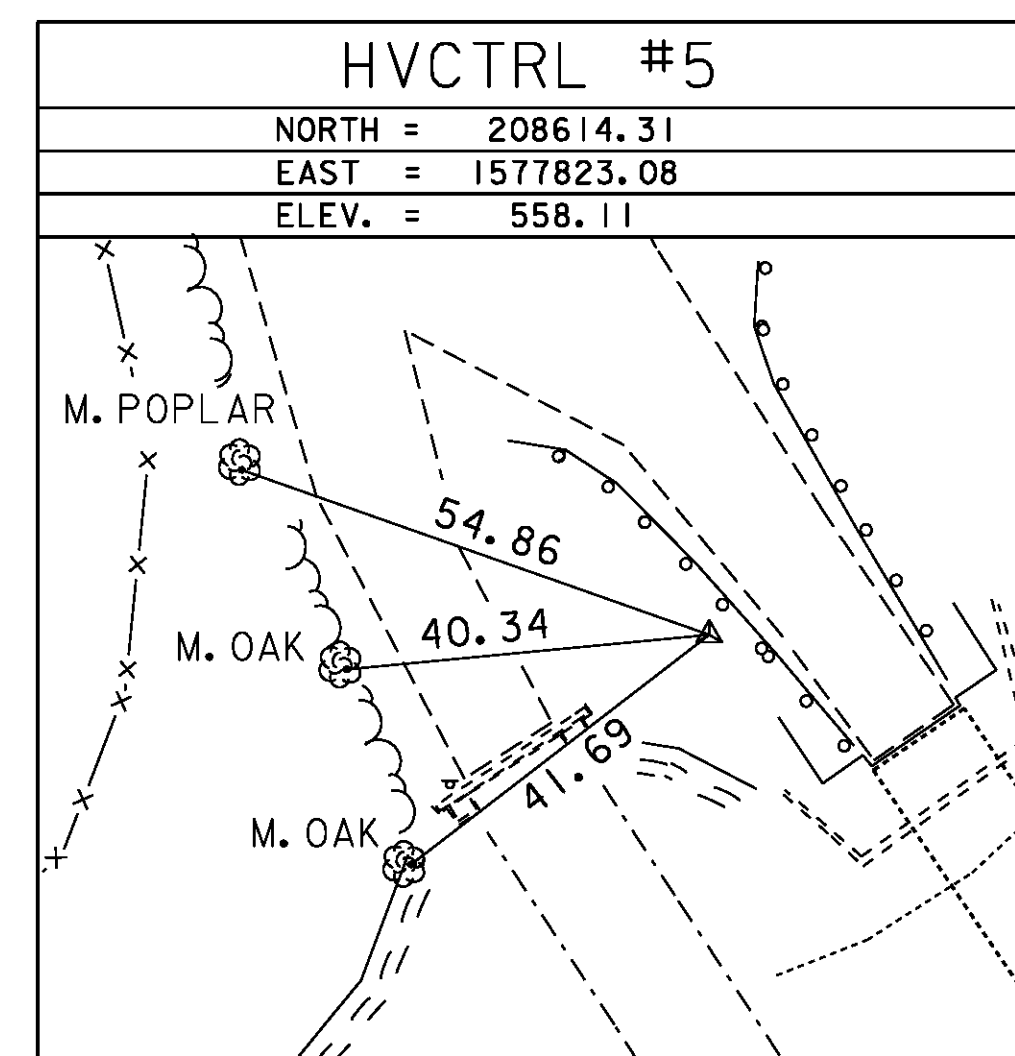
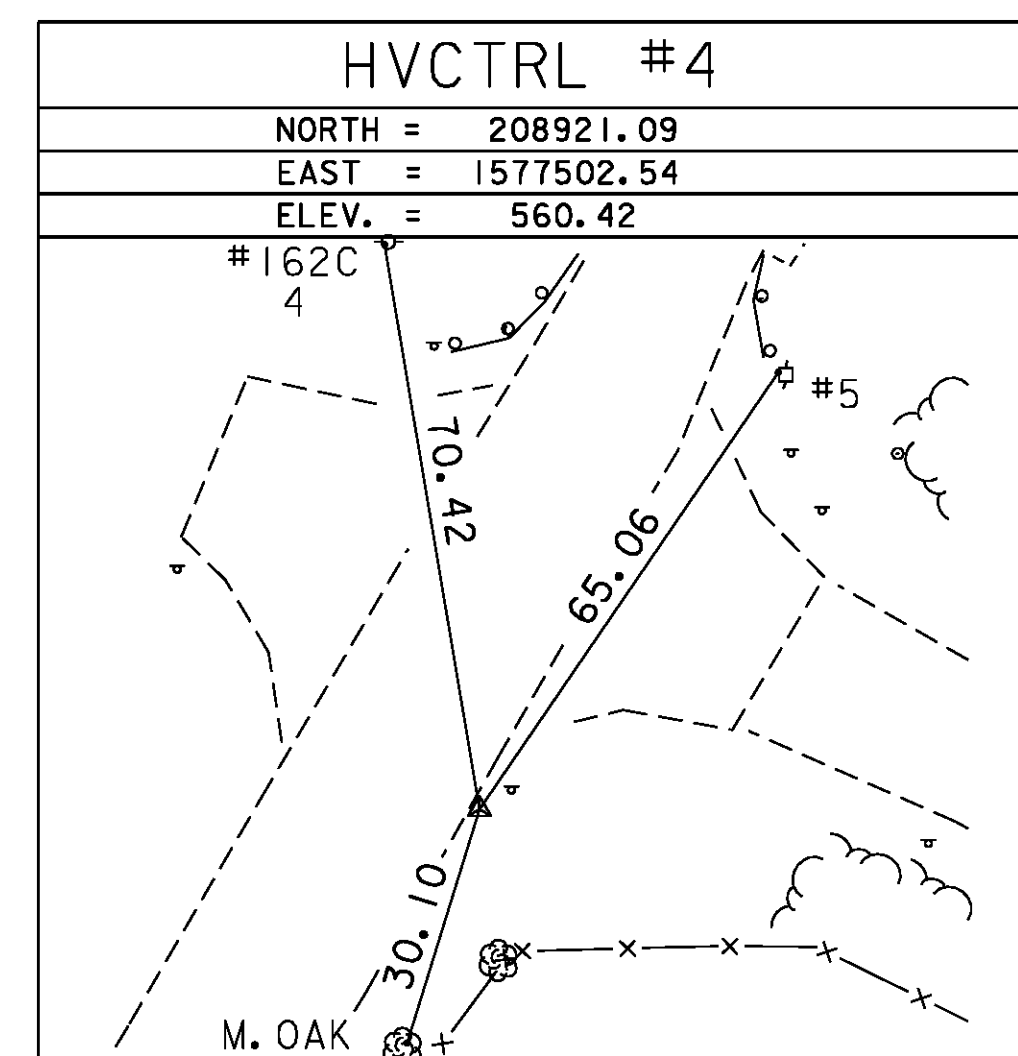
GENERAL LOCATION, JAMAICA, VT. TO REACH FROM THE MOST SOUTHERLY INTERSECTION OF VT ROUTES 100 AND 30 IN EAST JAMAICA GO EAST ALONG VT ROUTE 30 FOR 0.2 MI (0.3 KM) TO THE MARK ON THE RIGHT OPPOSITE A LEDGE CUT. THE MARK IS SET IN THE TOP OF A FENO TYPE MONUMENT FLUSH WITH GROUND SURFACE. IT IS 1.9 M (6.2 FT) SOUTH OF AND ABOUT LEVEL WITH THE SOUTH EDGE OF PAVEMENT OF VT ROUTE 30, 5.0 M (16.4 FT) WEST NORTHWEST OF POLE NO. 594/514, 21.0 M (68.9 FT) NORTHWEST OF A 60 CM PINE, AND 0.3 NORTH OF A FIBERGLASS WITNESS POST

HVCTRL #2

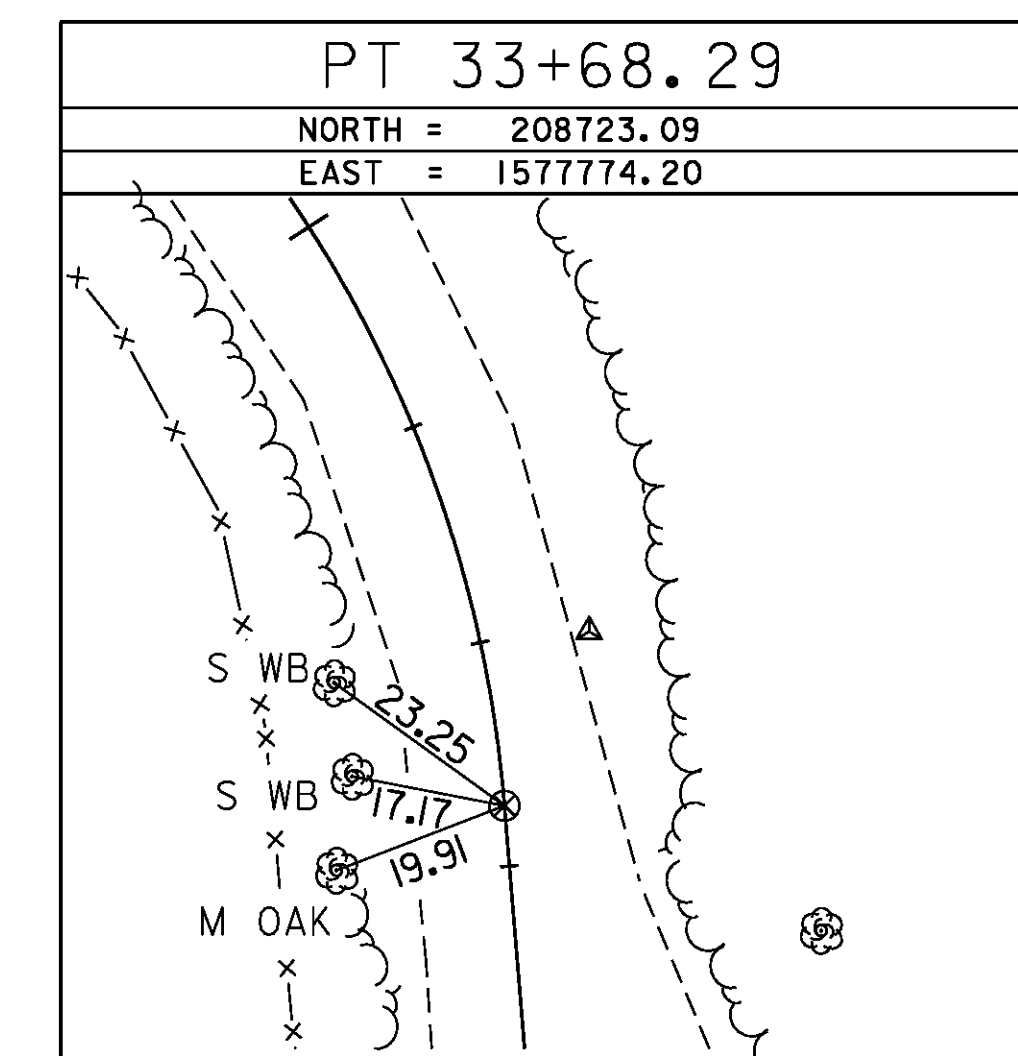
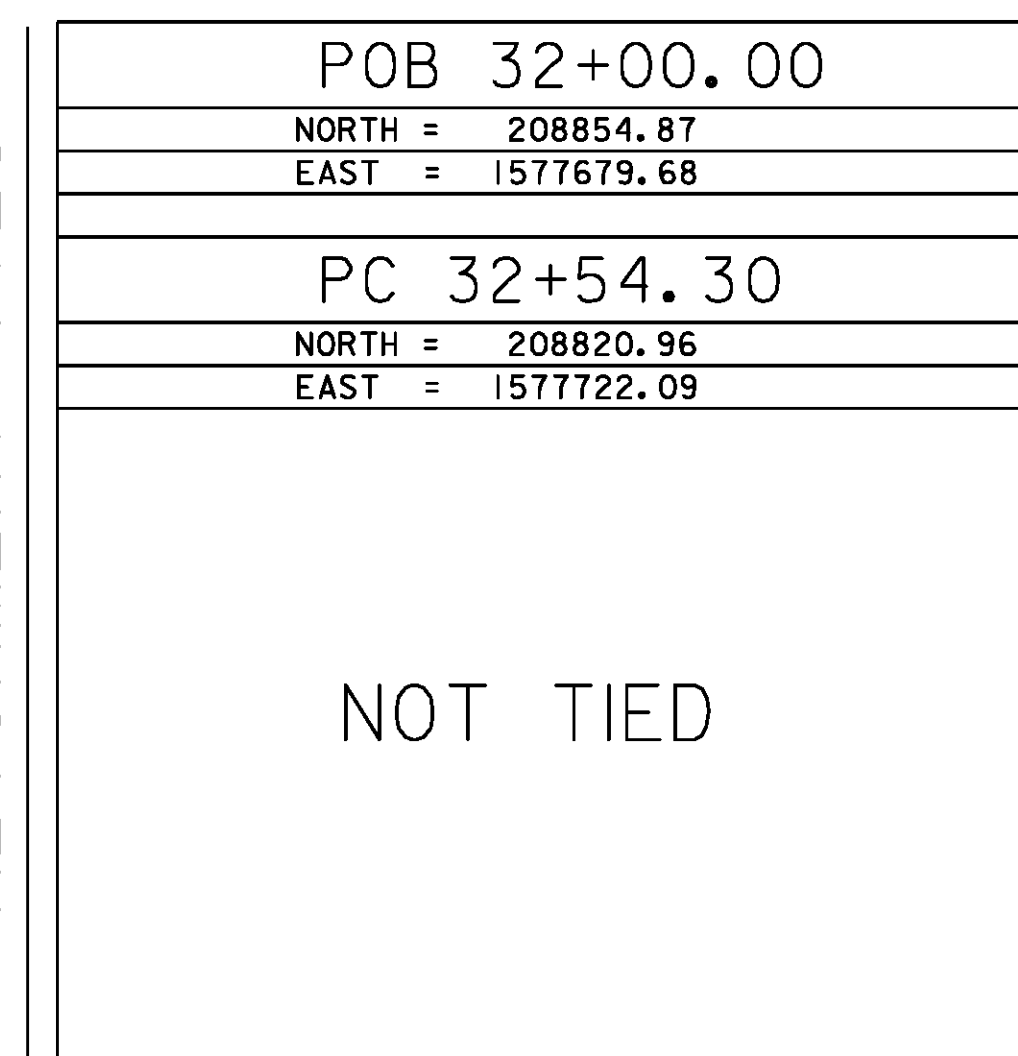
T 127
 NORTH = 209918.56
 EAST = 1577682.96
 ELEV. = 553.80

GENERAL LOCATION, JAMAICA, VT. TO REACH FROM THE MOST SOUTHERLY INTERSECTION OF VT ROUTES 100 AND 30 IN EAST JAMAICA GO WEST ALONG VT ROUTE 100 AND 30 FOR ABOUT 65 M (213.3 FT) TO THE INTERSECTION OF A GRAVEL ROAD RIGHT AND THE MARK ON THE RIGHT IN THE SOUTHWEST CORNER OF THE STEPHEN BALLANTINE MEMORIAL ATHLETIC FIELD COMPLEX. THE MARK IS SET FLUSH WITH GROUND SURFACE IN THE TOP OF A CAST ALUMINUM MONUMENT. IT IS 10.7 M (35.1 FT) NORTH OF AND ABOUT 2 M (6.6 FT) LOWER THAN THE NORTH EDGE OF PAVEMENT OF VT ROUTE 100 AND 30, 9.5 M (31.2 FT) EAST OF THE CENTERLINE OF THE GRAVEL ROAD, 18.2 M (59.7 FT) NORTHWEST OF POLE NO. 599/5/505, AND 0.1 SOUTH OF A FIBERGLASS WITNESS POST.

TRAVERSE TIES

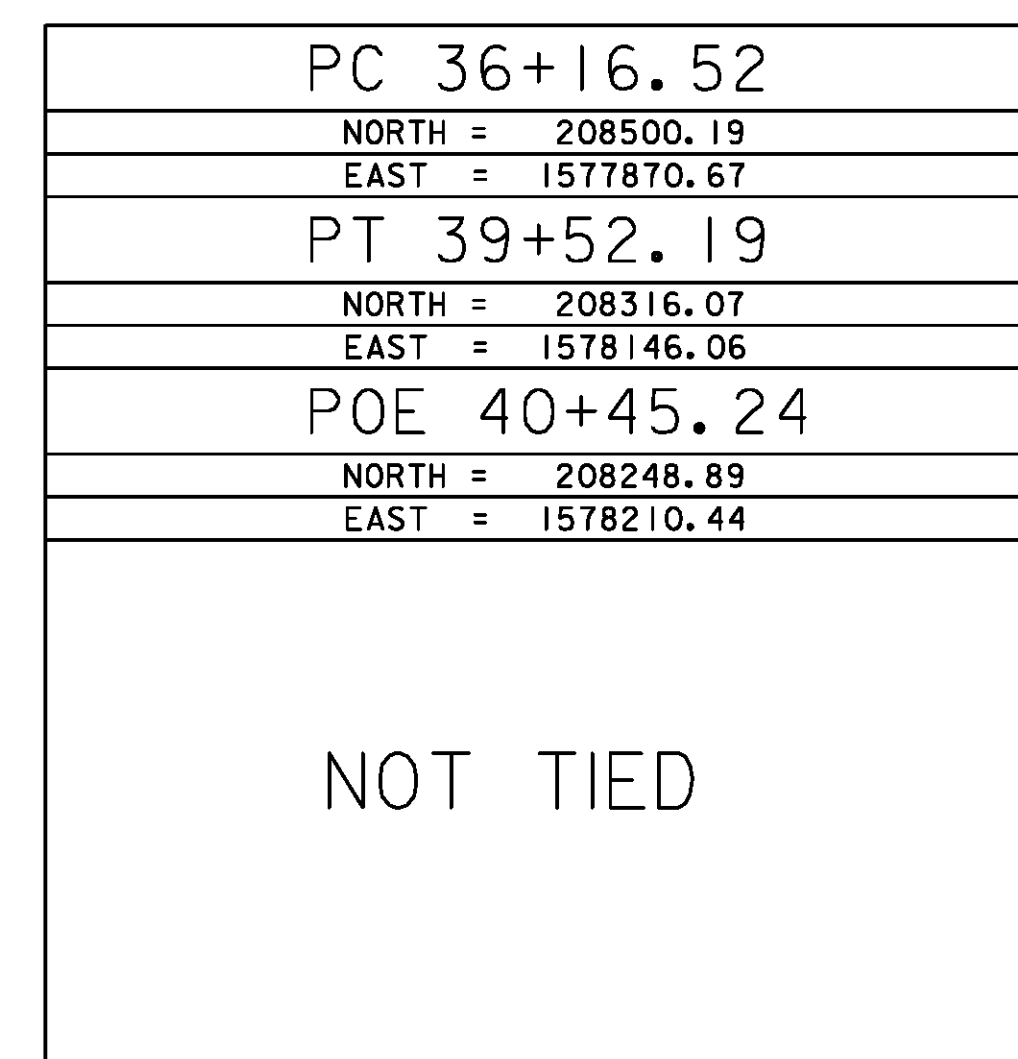
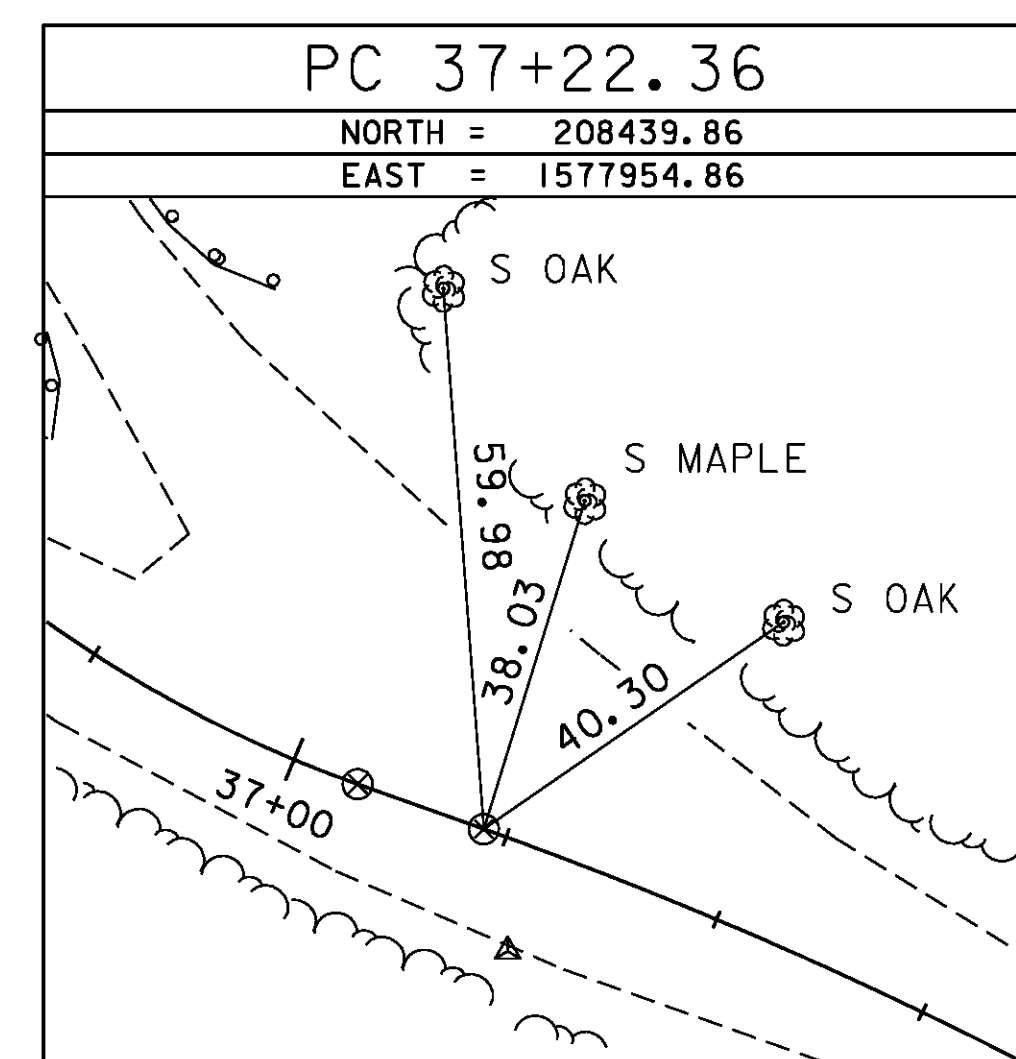
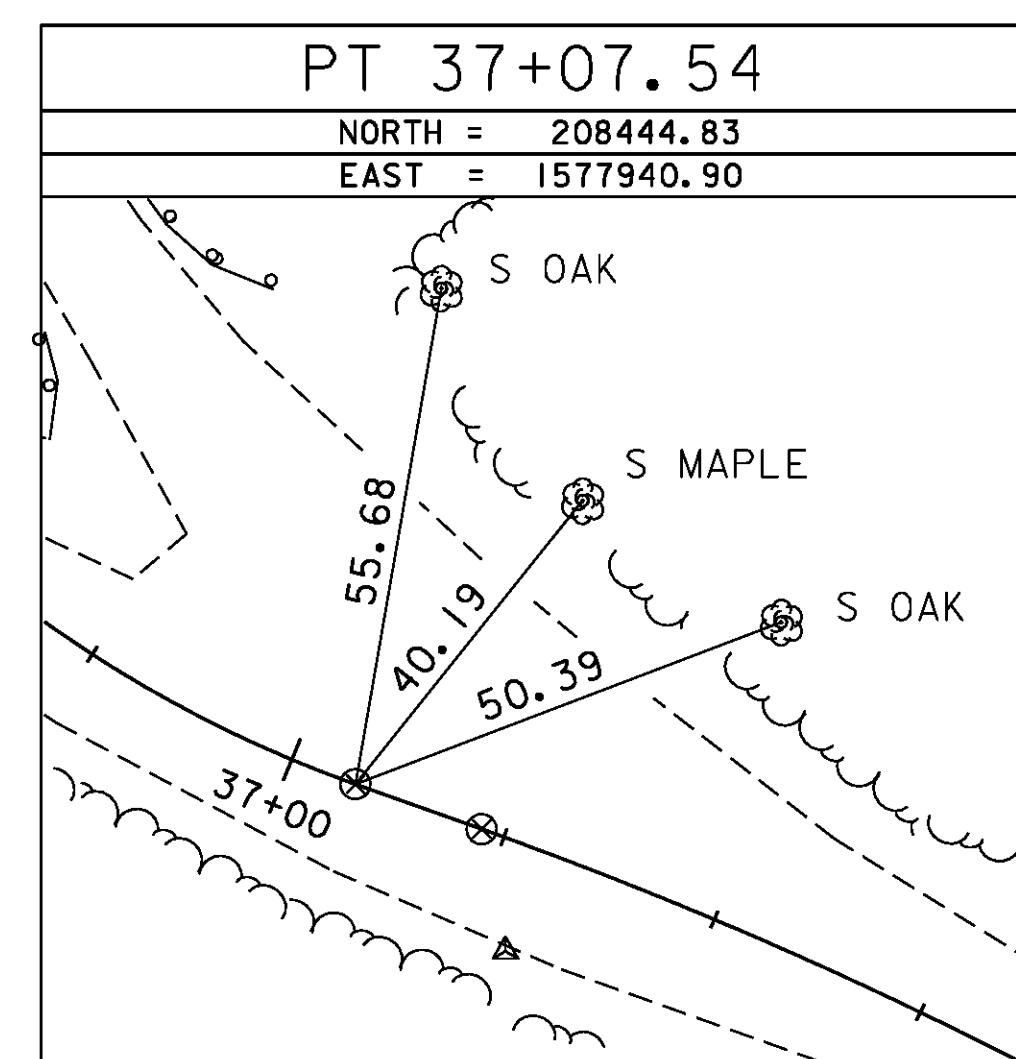
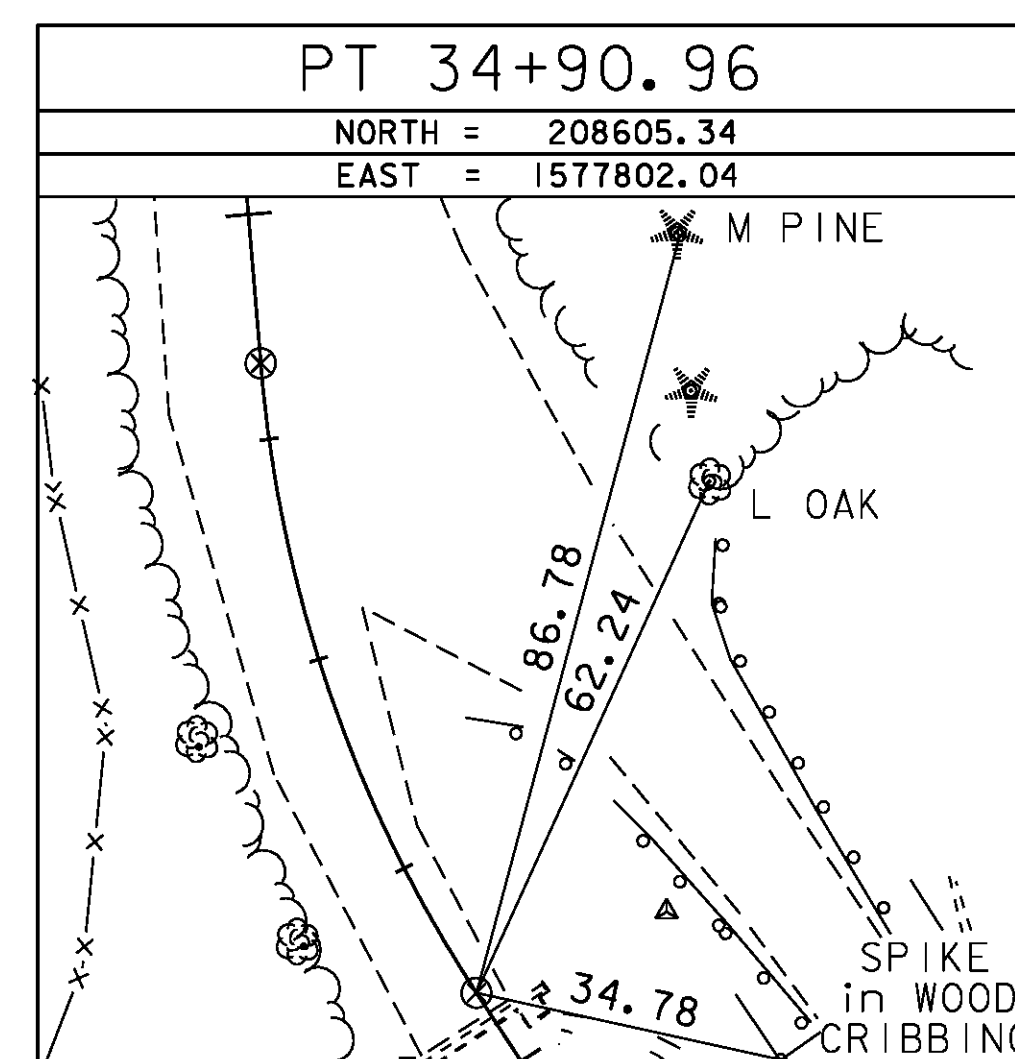
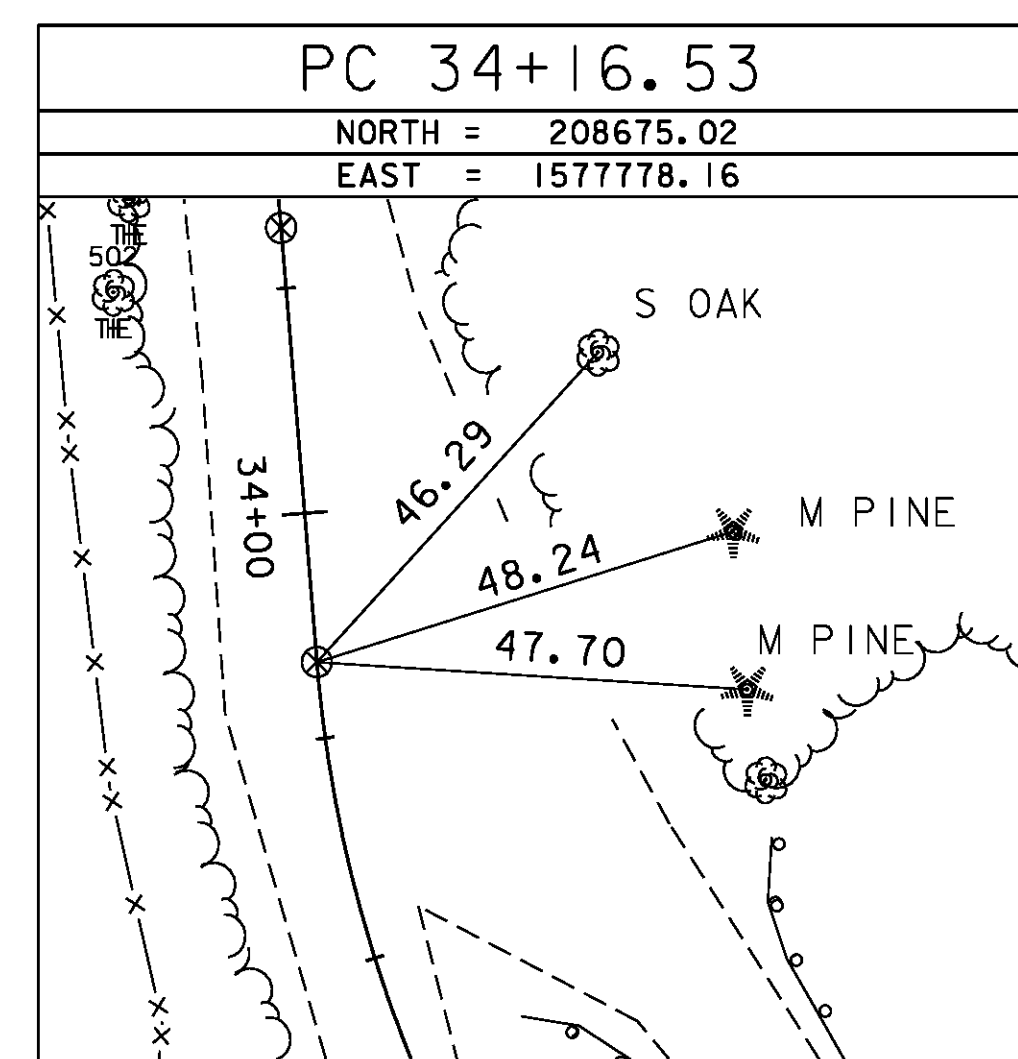


ALIGNMENT TIES



* Main Traverse Completed 04/21/98 by R. Gilman P.C. & T. Companion

ALIGNMENT TIES



* Alignment Staked 3/22/07 by R. Gilman P.C. & R. Bullock & P. Winters

| | |
|------------|-------------|
| DATUM | |
| VERTICAL | NAVD 88 |
| HORIZONTAL | NAD 83 (92) |
| ADJUSTMENT | COMPASS |

| | |
|-----------------|----------------------------|
| PROJECT NAME: | Jamaica |
| PROJECT NUMBER: | BRO 1442 (27) |
| FILE NAME: | 96J068\survey\96J068+1.dgn |
| PROJECT LEADER: | K. HIGGINS |
| DESIGNED BY: | SURVEY |
| TIE SHEET | |
| PLOT DATE: | 19-OCT-2009 |
| DRAWN BY: | R. bullock |
| CHECKED BY: | SURVEY |
| SHEET | 7 OF 44 |

WEST RIVER

CURVE #1 DATA

Δ = 46° 40' 00"
 D = 40° 55' 32"
 R = 140.00'
 T = 60.39'
 L = 114.03'
 E = 12.47'

BOX BEAM GUARDRAIL
 34+29.25 - 34+67.78 LT.
 34+38.12 - 34+70.95 RT.
 36+45.79 - 36+84.61 LT. 89.00
 36+41.76 - 37+44.37 RT. 57.00

SPECIAL PROVISION
 (GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM)

34+67.78 - 35+01.48 LT.
 34+70.95 - 35+01.48 RT.
 36+11.48 - 36+45.79 LT.
 36+11.48 - 36+41.76 RT.

SPECIAL PROVISION
 (BRIDGE RAILING, GALVANIZED 3 RAIL BOX BEAM)

35+01.48 - 36+11.48 LT.
 35+01.48 - 36+11.48 RT.

REMOVAL AND DISPOSAL OF GUARDRAIL

34+51 - 35+14 LT.
 34+62 - 35+14 RT.
 36+00 - 36+67 LT.
 36+00 - 36+56 RT.

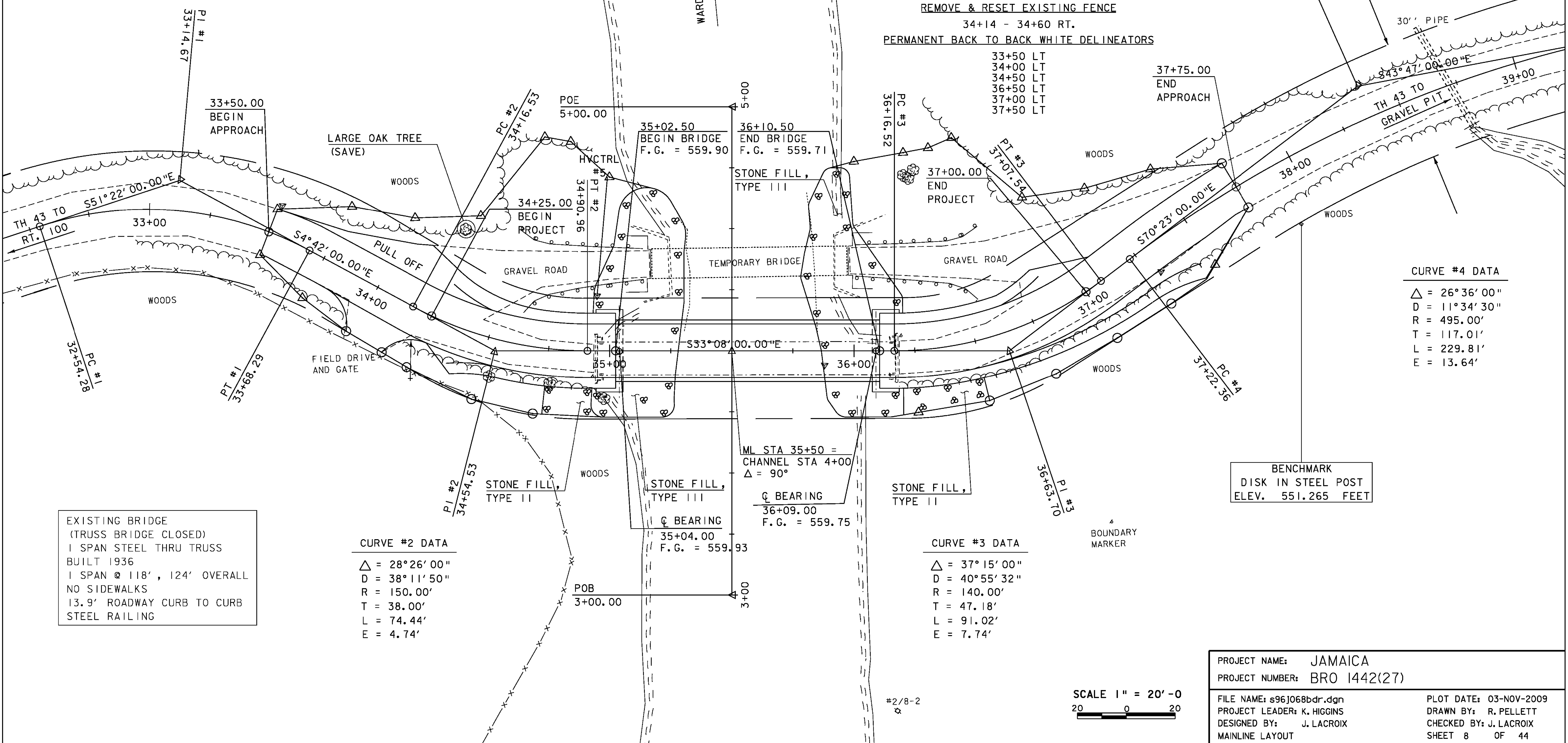
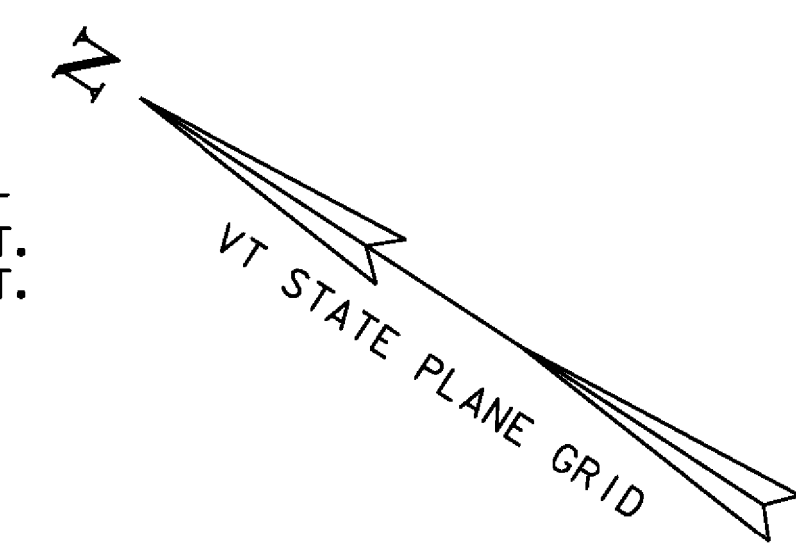
REMOVE & RESET EXISTING FENCE
 34+14 - 34+60 RT.

PERMANENT BACK TO BACK WHITE DELINEATORS

33+50 LT
 34+00 LT
 34+50 LT
 36+50 LT
 37+00 LT
 37+50 LT

CONSTRUCT DRIVE
 34+06 RT.

STONE FILL, TYPE II
 34+75.0 - 34+92.8 RT.
 36+19.9 - 36+50.0 RT.



CURVE #4 DATA

Δ = 26° 36' 00"
 D = 11° 34' 30"
 R = 495.00'
 T = 117.01'
 L = 229.81'
 E = 13.64'

CURVE #2 DATA

Δ = 28° 26' 00"
 D = 38° 11' 50"
 R = 150.00'
 T = 38.00'
 L = 74.44'
 E = 4.74'

CURVE #3 DATA

Δ = 37° 15' 00"
 D = 40° 55' 32"
 R = 140.00'
 T = 47.18'
 L = 91.02'
 E = 7.74'

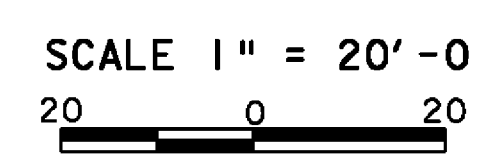
EXISTING BRIDGE
 (TRUSS BRIDGE CLOSED)
 1 SPAN STEEL THRU TRUSS
 BUILT 1936
 1 SPAN @ 118', 124' OVERALL
 NO SIDEWALKS
 13.9' ROADWAY CURB TO CURB
 STEEL RAILING

BENCHMARK
 DISK IN STEEL POST
 ELEV. 551.265 FEET

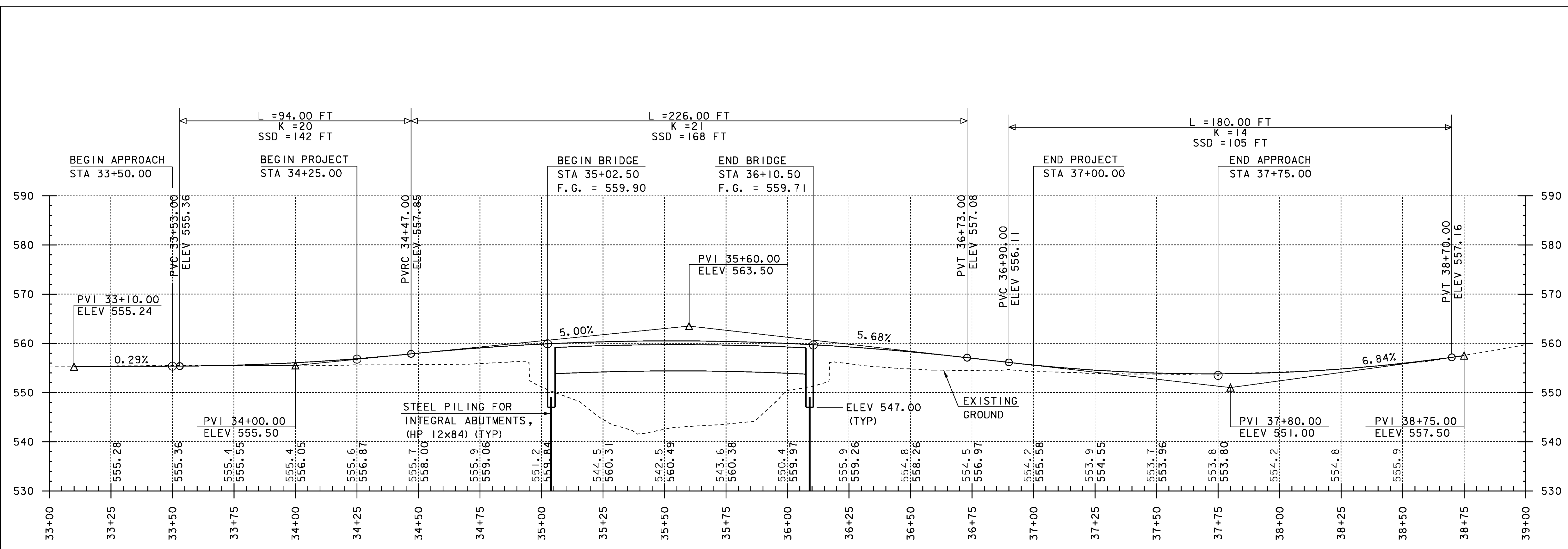
PROJECT NAME: JAMAICA
 PROJECT NUMBER: BRO 1442(27)

FILE NAME: s96j068bdr.dgn
 PROJECT LEADER: K. HIGGINS
 DESIGNED BY: J. LACROIX
 MAINLINE LAYOUT

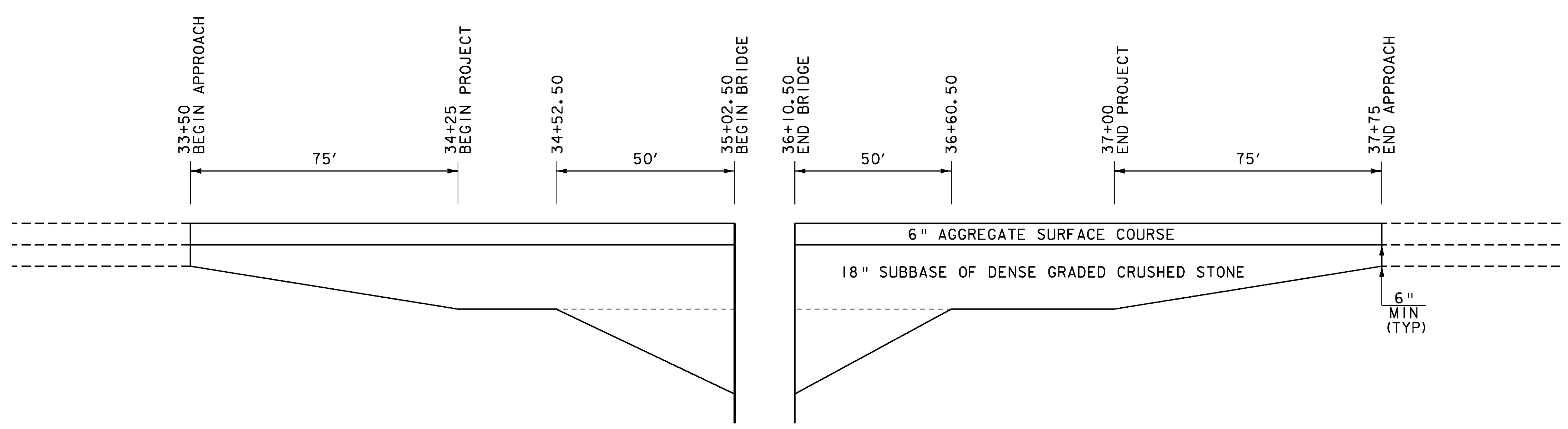
PLOT DATE: 03-NOV-2009
 DRAWN BY: R. PELLETT
 CHECKED BY: J. LACROIX
 SHEET 8 OF 44



#2/8-2

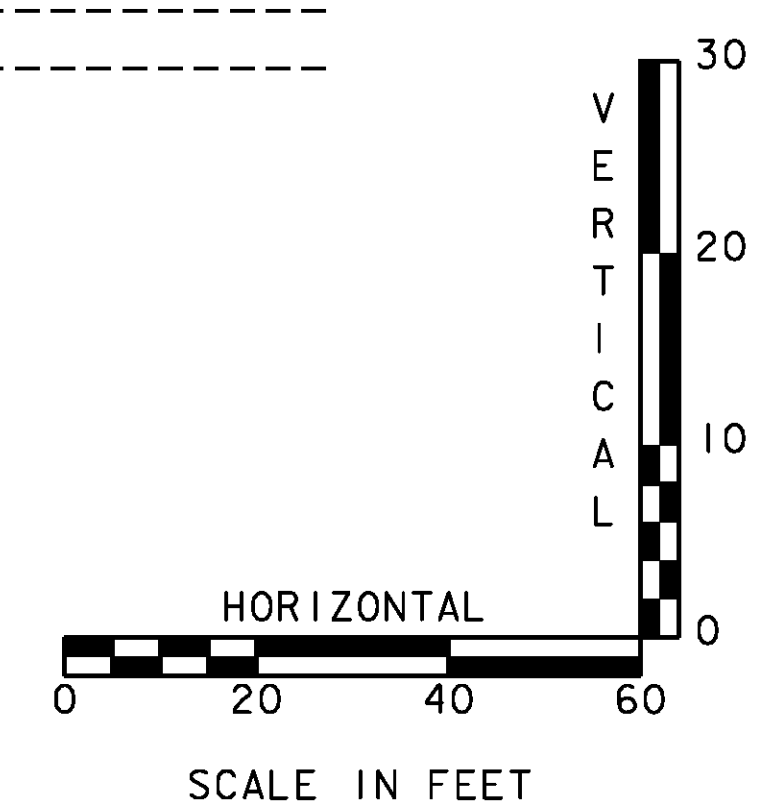


MAINLINE PROFILE

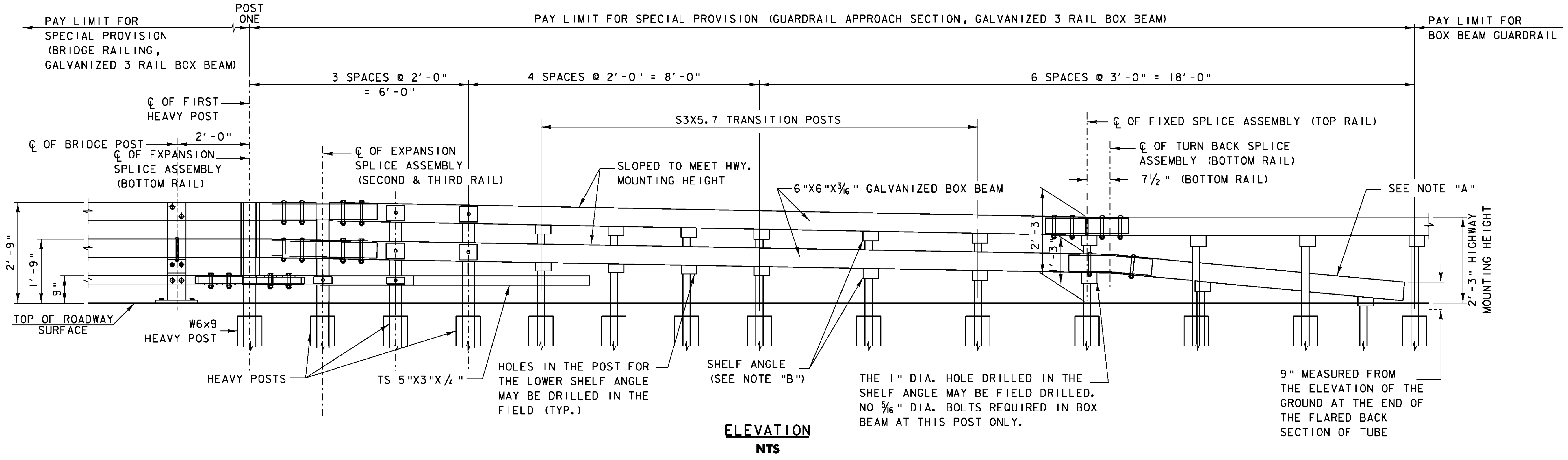
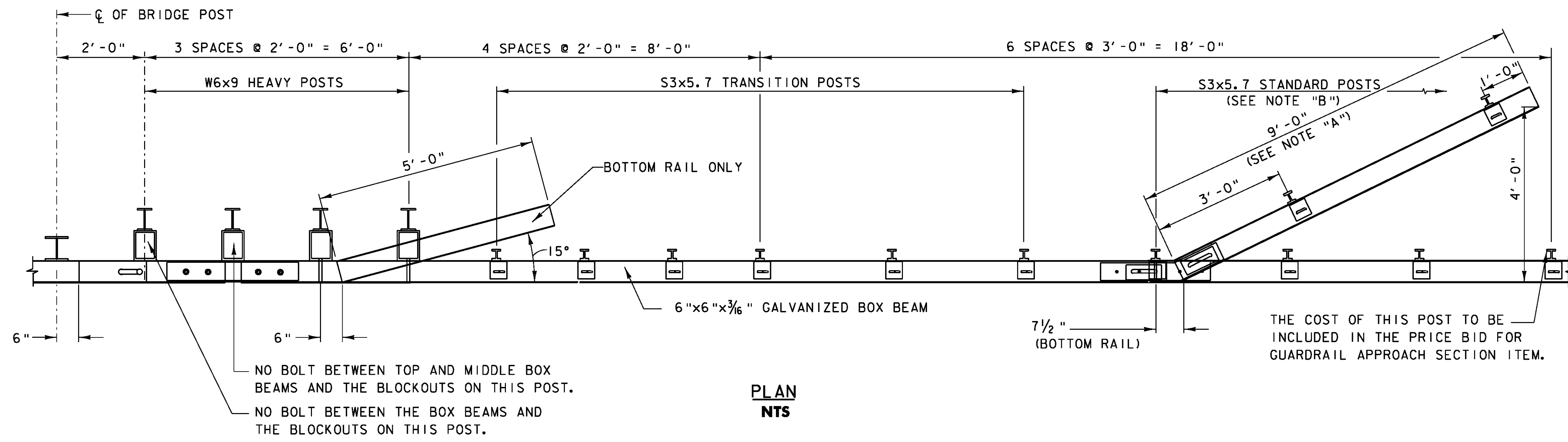


MATERIAL TRANSITION
NOT TO SCALE

THE GRADES SHOWN TO THE NEAREST TENTH ARE THE ORIGINAL GROUND ELEVATIONS ALONG THE PROPOSED ALIGNMENT. THE GRADES SHOWN TO THE NEAREST HUNDREDTH ARE THE PROPOSED GRADES FOR THE NEW ALIGNMENT.

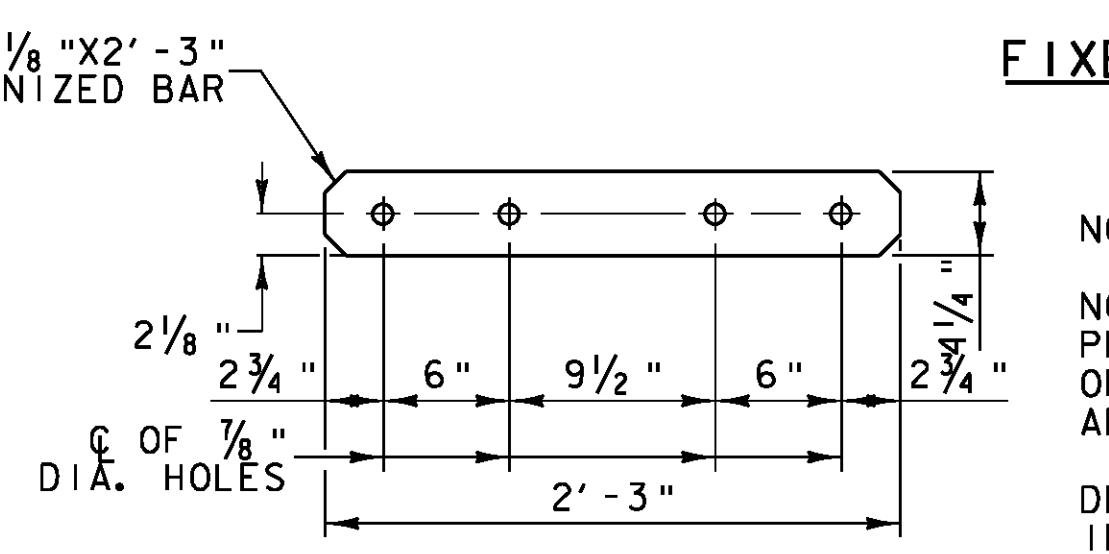
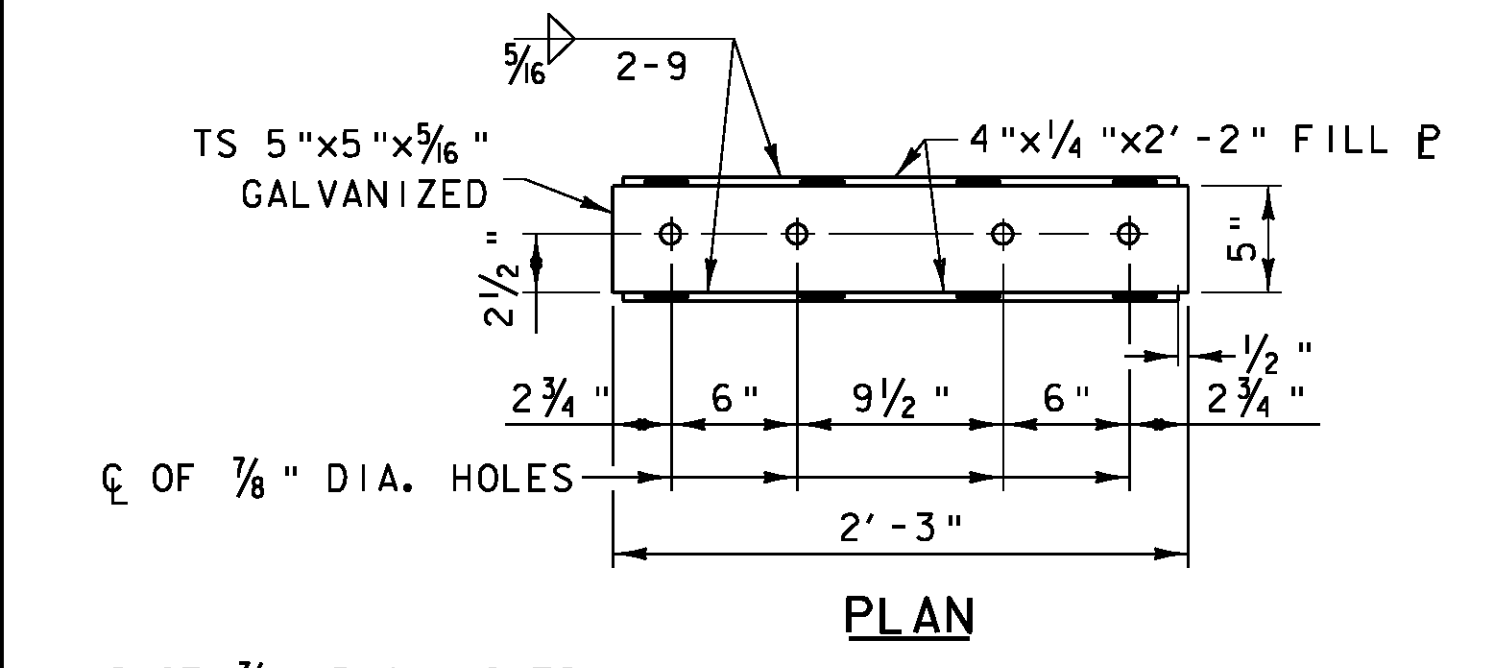
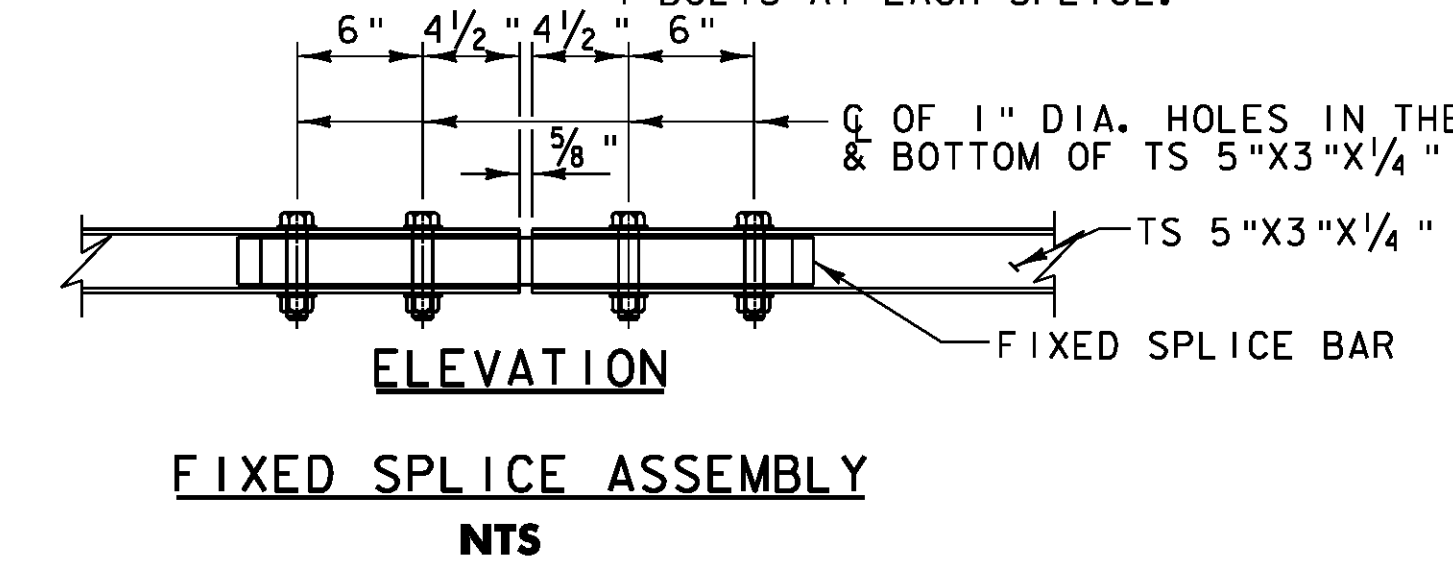
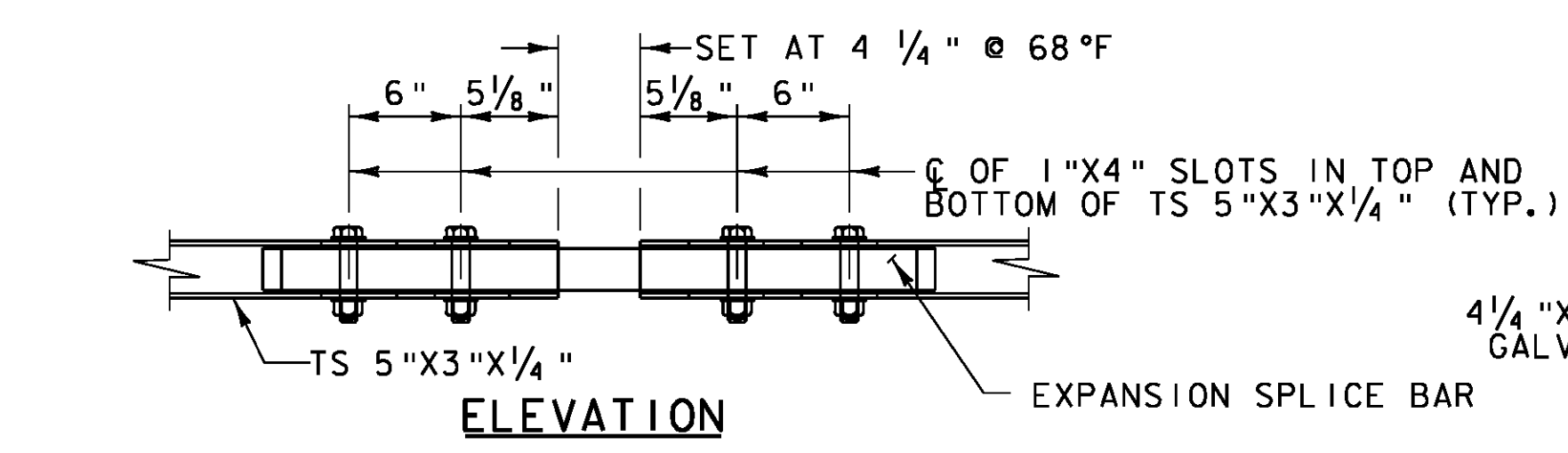
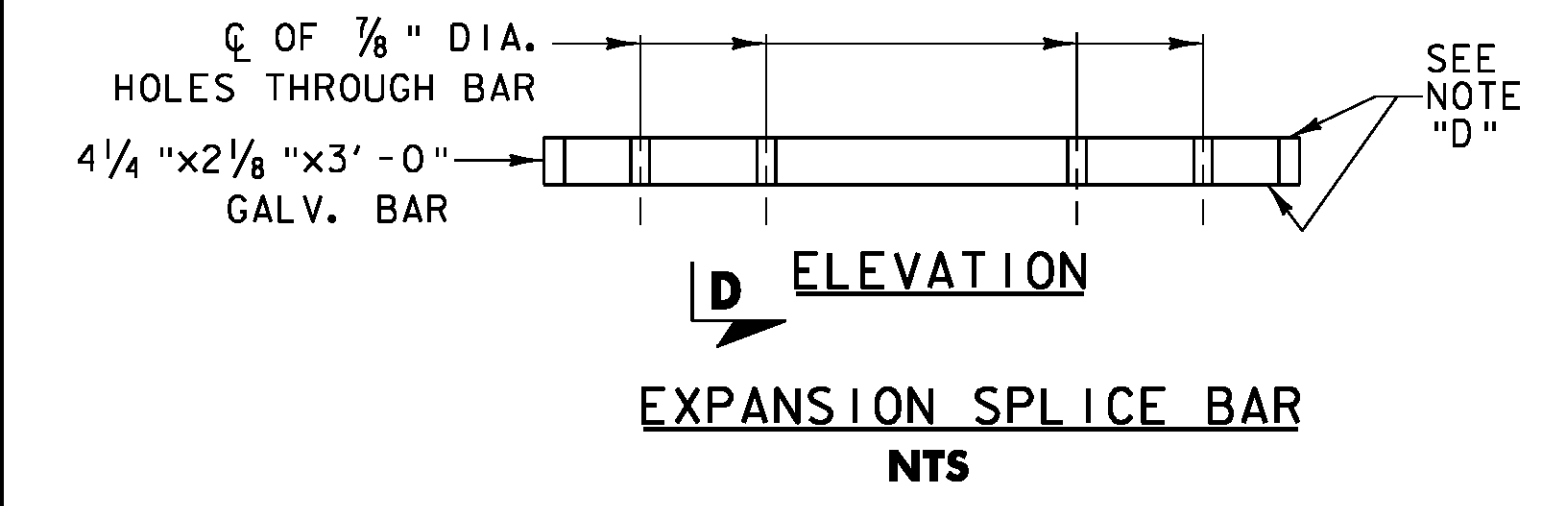
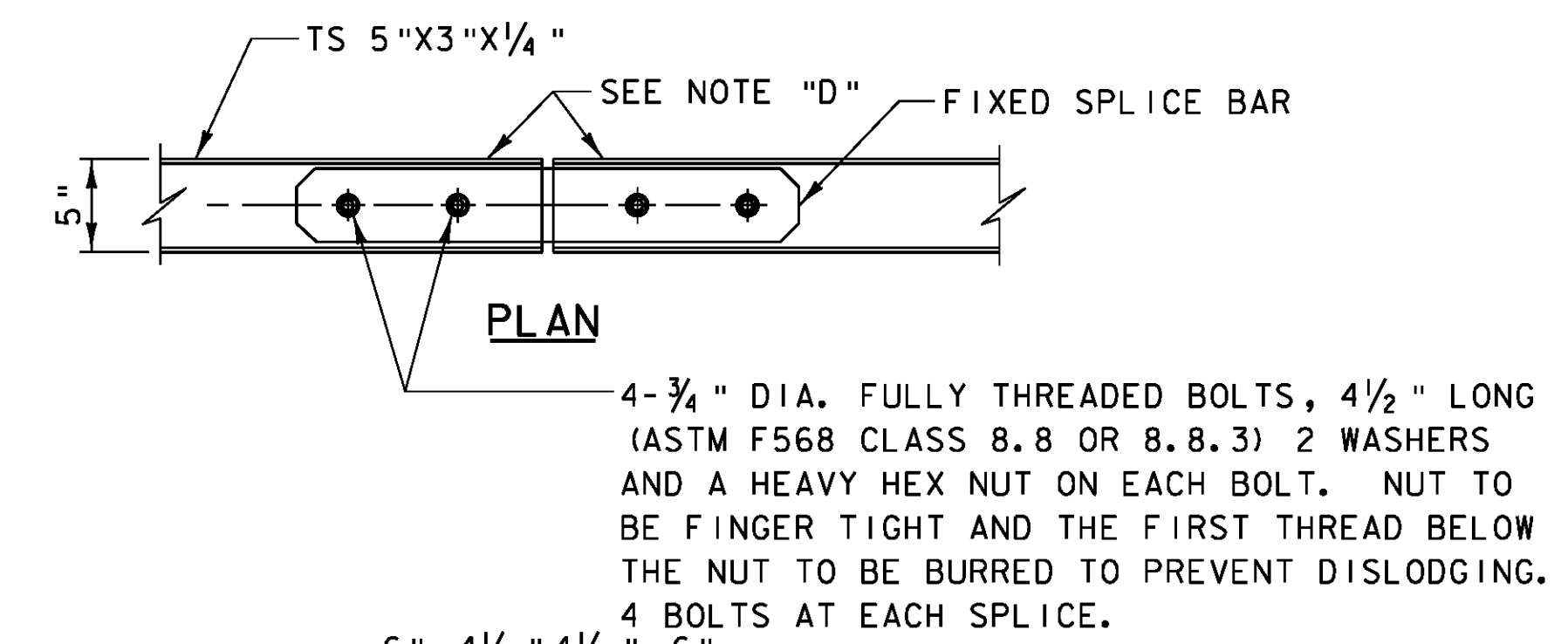
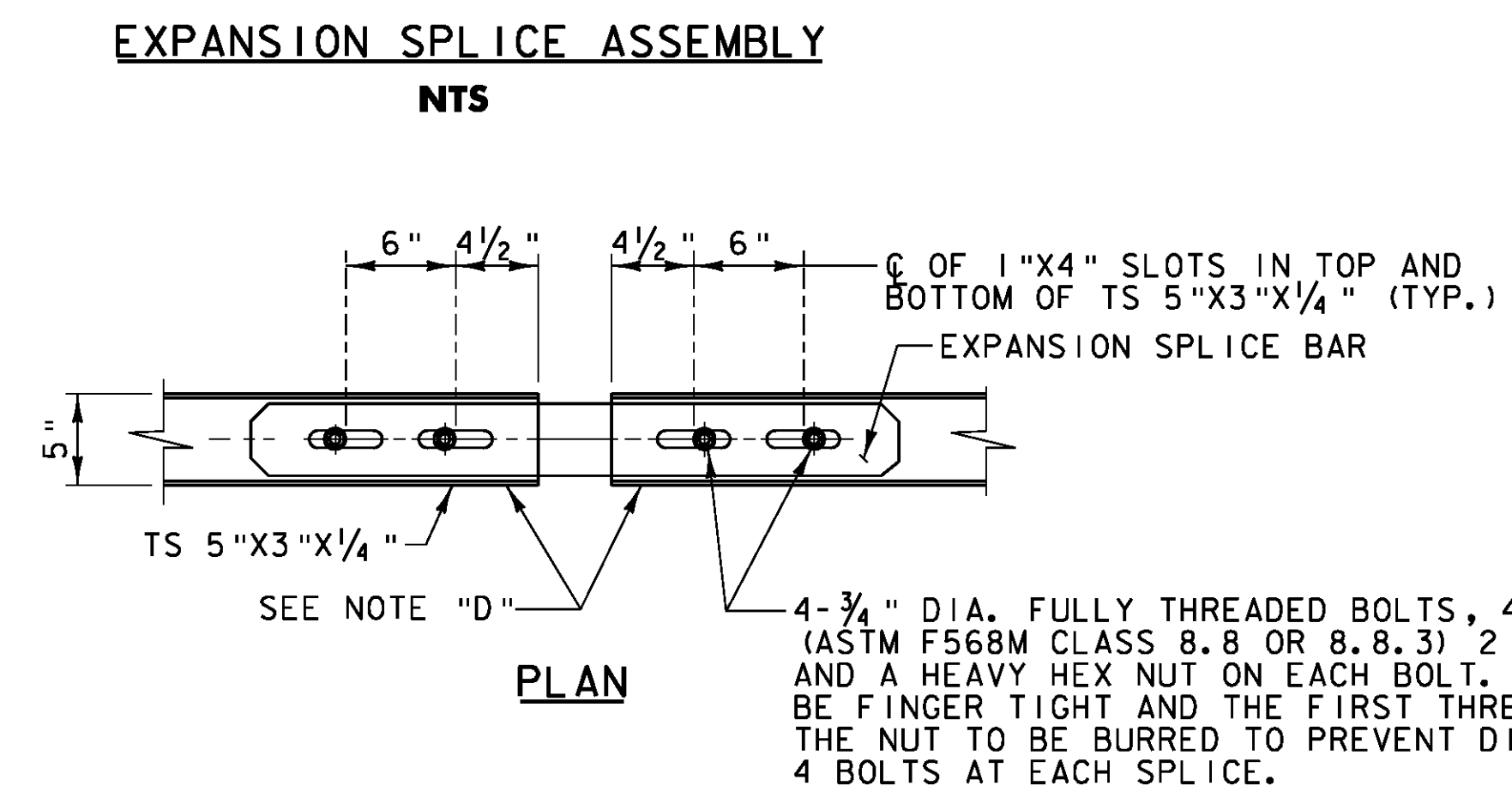
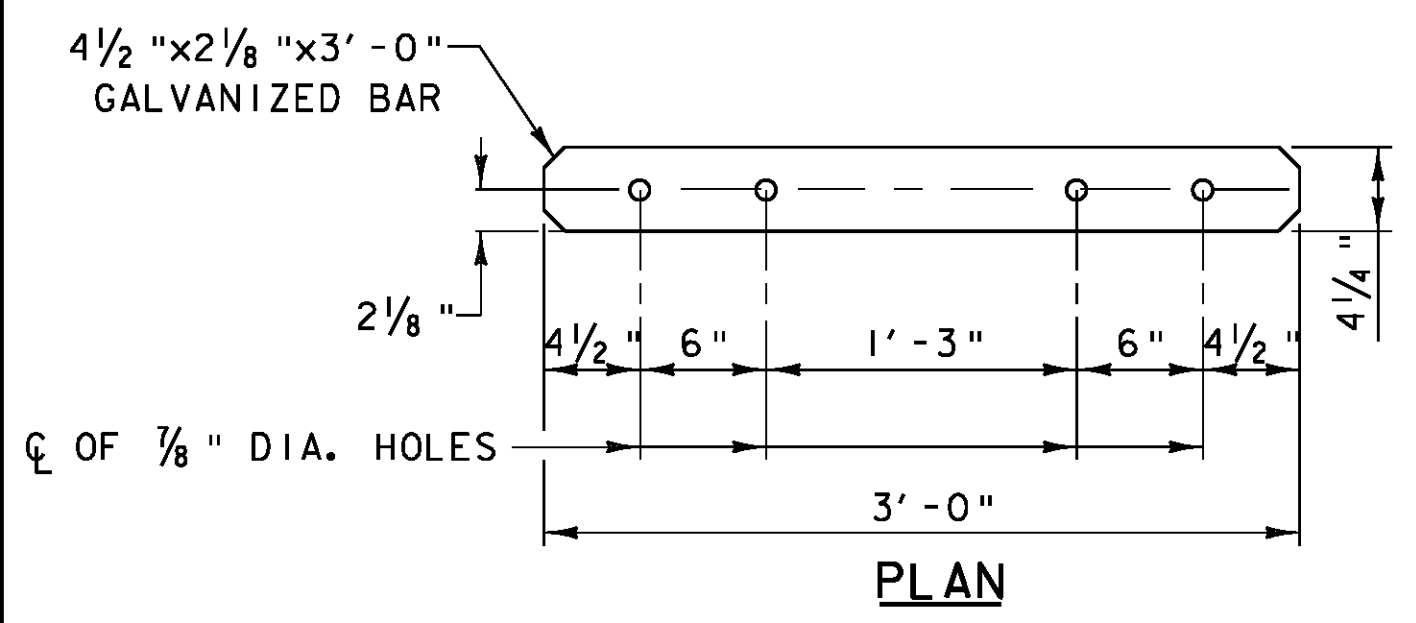
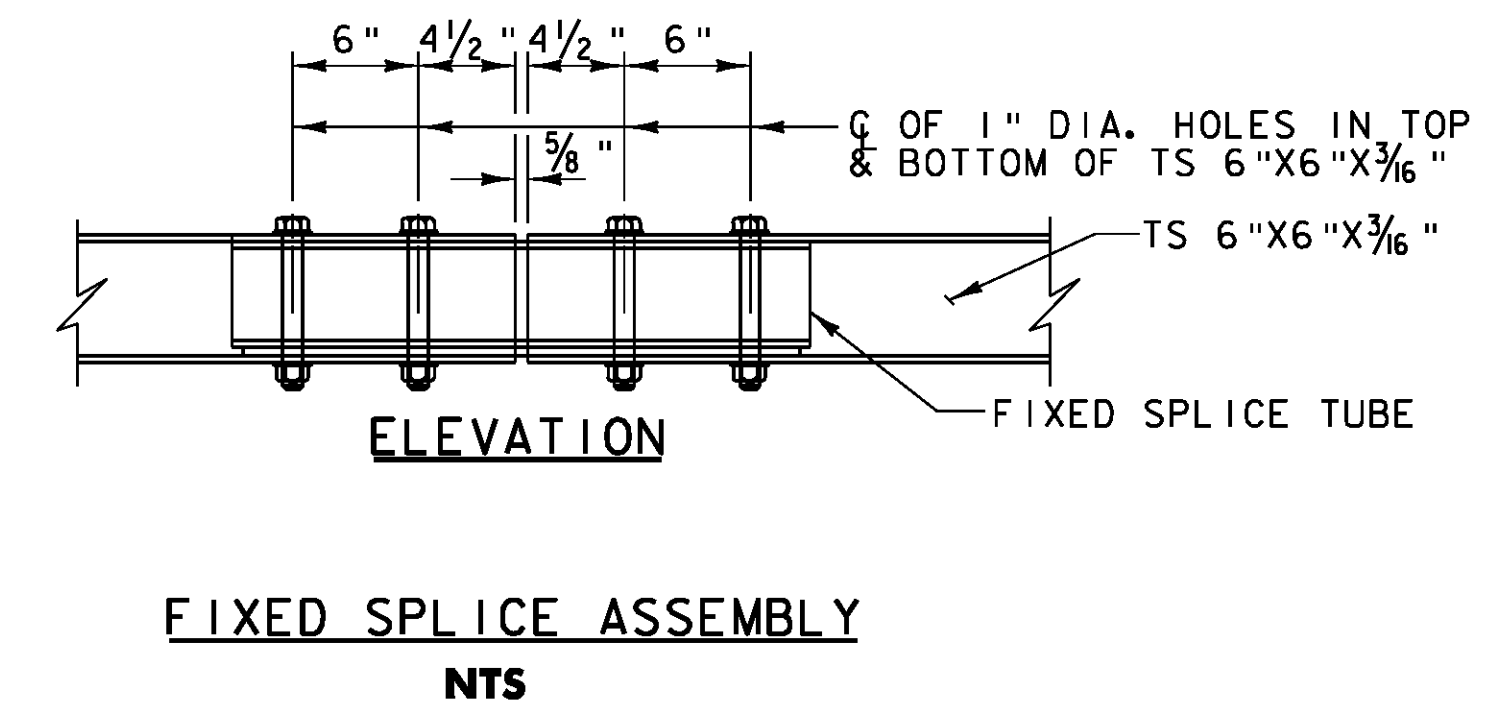
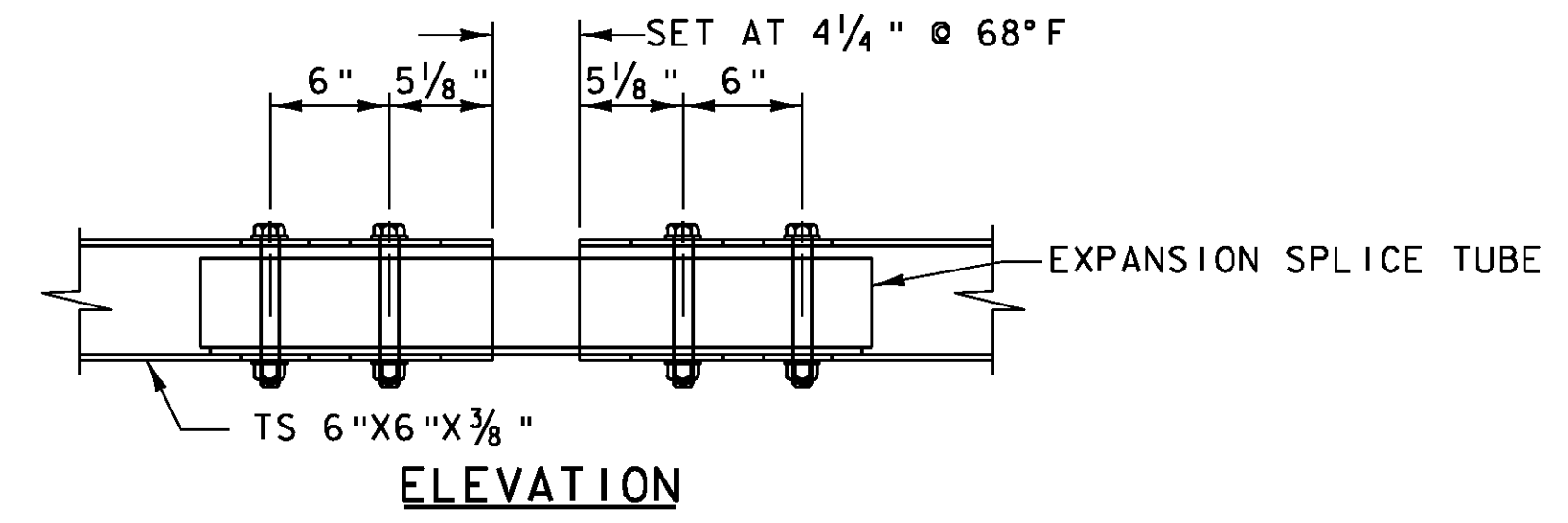
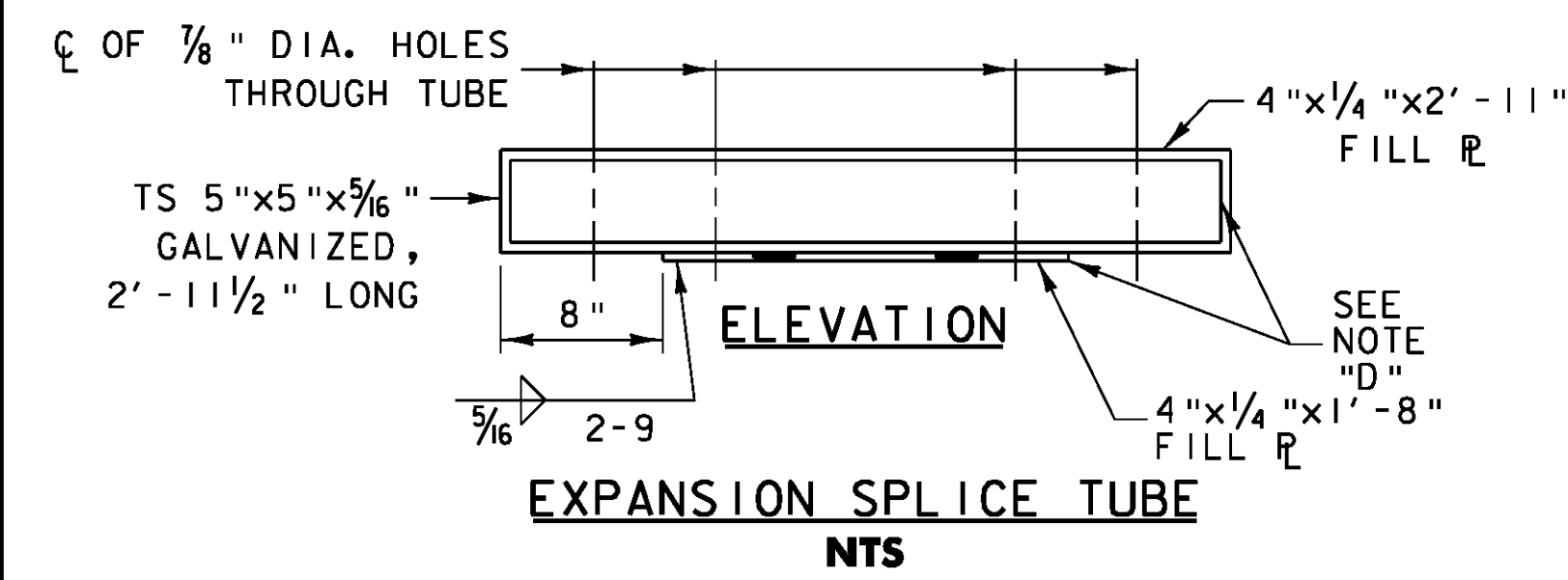
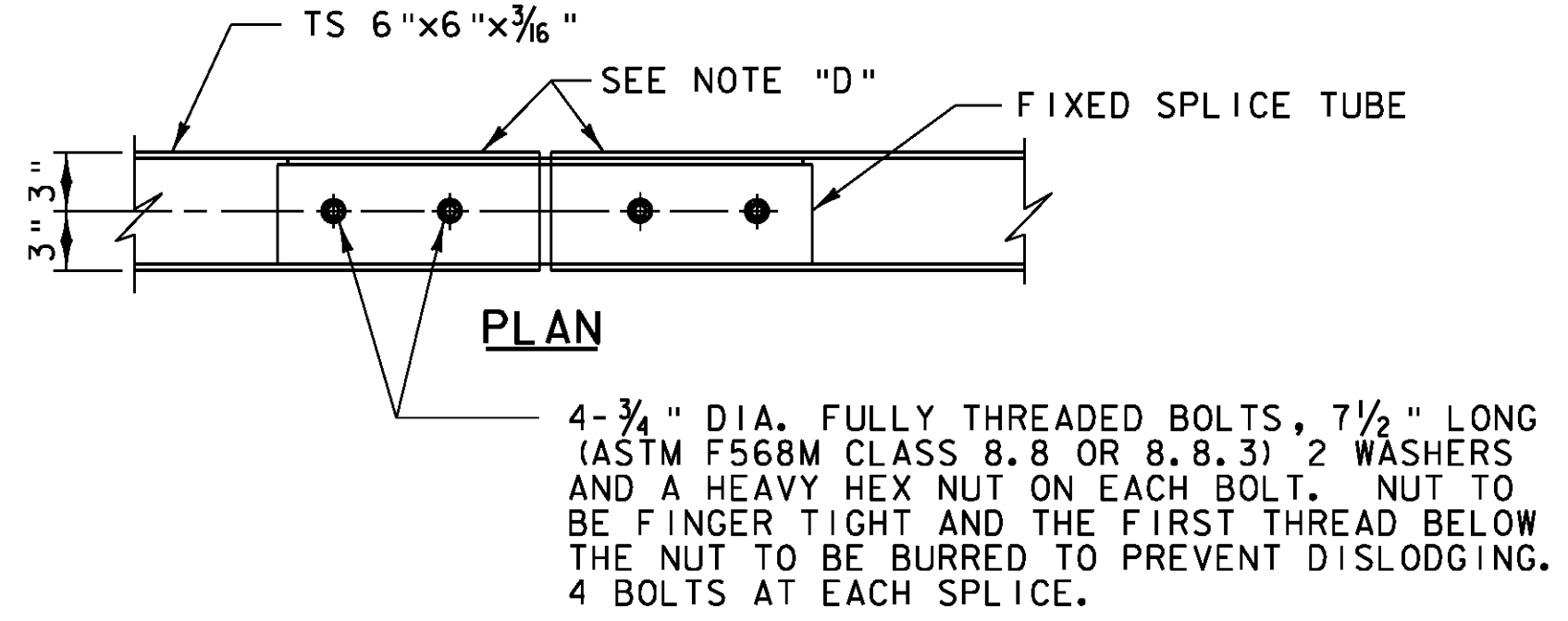
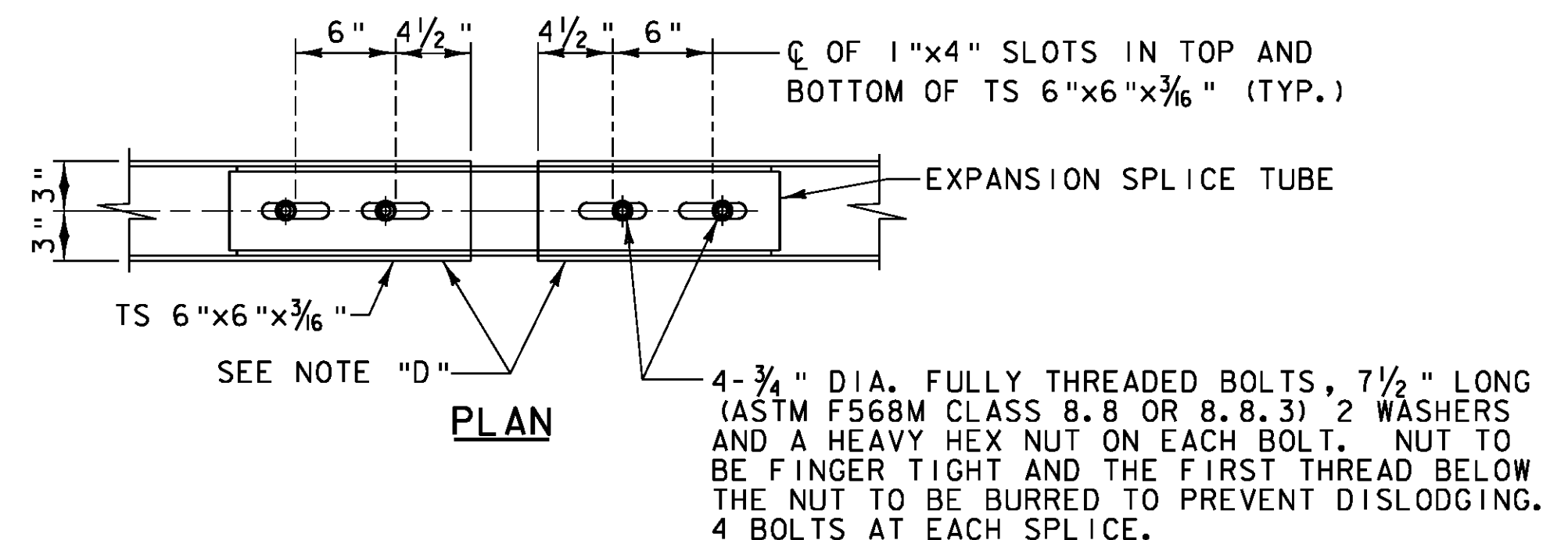
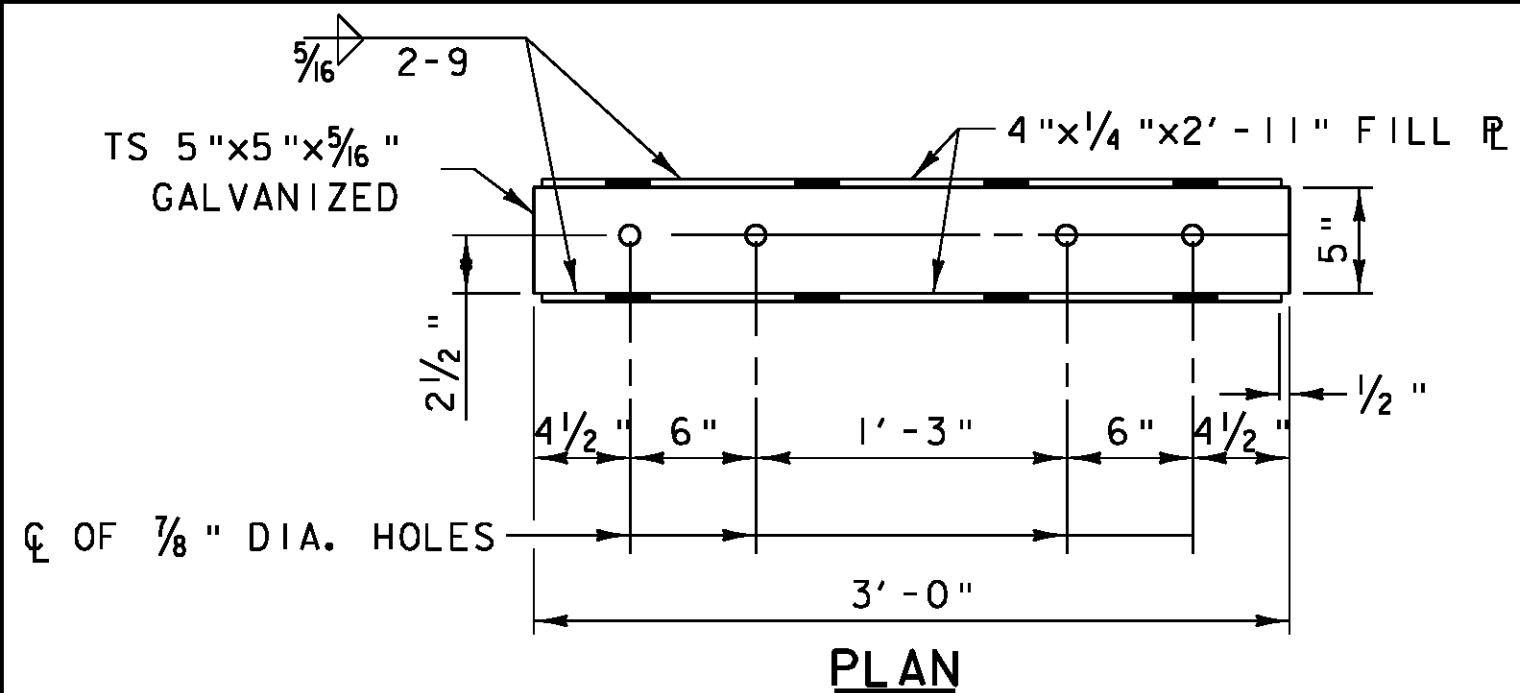


| | |
|--|------------------------|
| PROJECT NAME: JAMAICA | |
| PROJECT NUMBER: BRO 1442(27) | |
| FILE NAME: s961068pro.dgn | PLOT DATE: 03-NOV-2009 |
| PROJECT LEADER: K. HIGGINS | DRAWN BY: R. PELLETT |
| DESIGNED BY: J. LACROIX | CHECKED BY: J. LACROIX |
| MAINLINE PROFILE & MATERIAL TRANSITION SHEET 9 OF 44 | |



NOTES:
 NOTE "A":
 THE COST OF THE POSTS, SPLICE TUBE AND RAIL FOR THE LOWER TUBE FLARE SECTION IS INCLUDED IN THE PRICE BID FOR THE APPROACH SECTION ITEM.
 NOTE "B":
 SEE TYPICAL RAIL TO POST CONNECTION DETAIL ON STANDARD G1-B.
 DETAILS ON THE DRAWINGS LABELED AS "NOT TO SCALE" ARE INTENTIONALLY DRAWN NOT TO SCALE FOR VISUAL CLARITY. ALL OTHER DETAILS, FOR WHICH NO SCALE IS SHOWN, ARE DRAWN PROPORTIONAL AND ARE FULLY DIMENSIONED.
 ALL DIMENSIONS ARE SHOWN IN FEET & INCHES UNLESS OTHERWISE NOTED.

| | |
|--------------------------------|--------------------|
| PROJECT NAME: | JAMAICA |
| PROJECT NUMBER: | BRO 1442(27) |
| FILE NAME: | s96j068r.dldet.dgn |
| PROJECT LEADER: | K. HIGGINS |
| DESIGNED BY: | VTRANS |
| BRIDGE RAILING DETAIL SHEET #2 | |
| PLOT DATE: | 17-DEC-2009 |
| DRAWN BY: | VTRANS |
| CHECKED BY: | VTRANS |
| SHEET 2 | OF 4 |

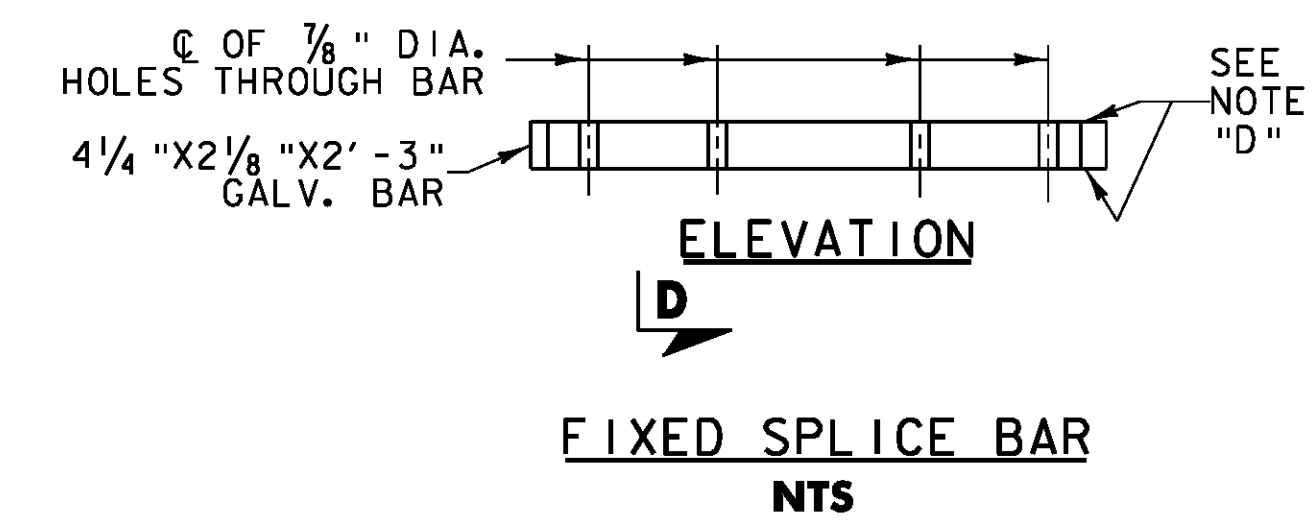
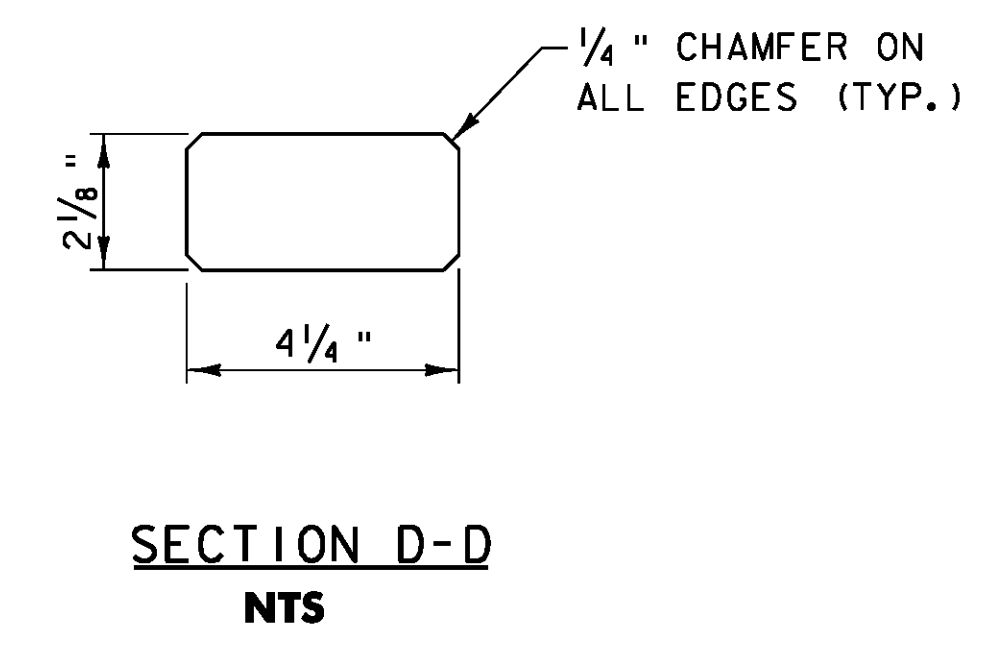
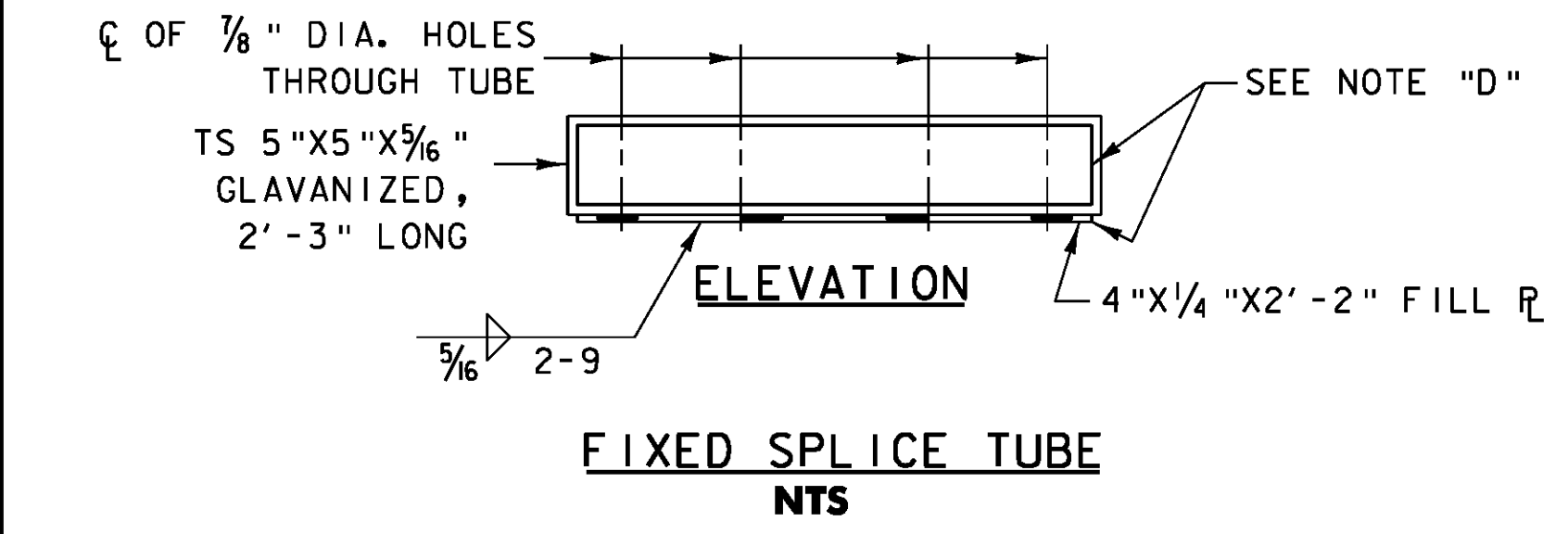


NOTES:

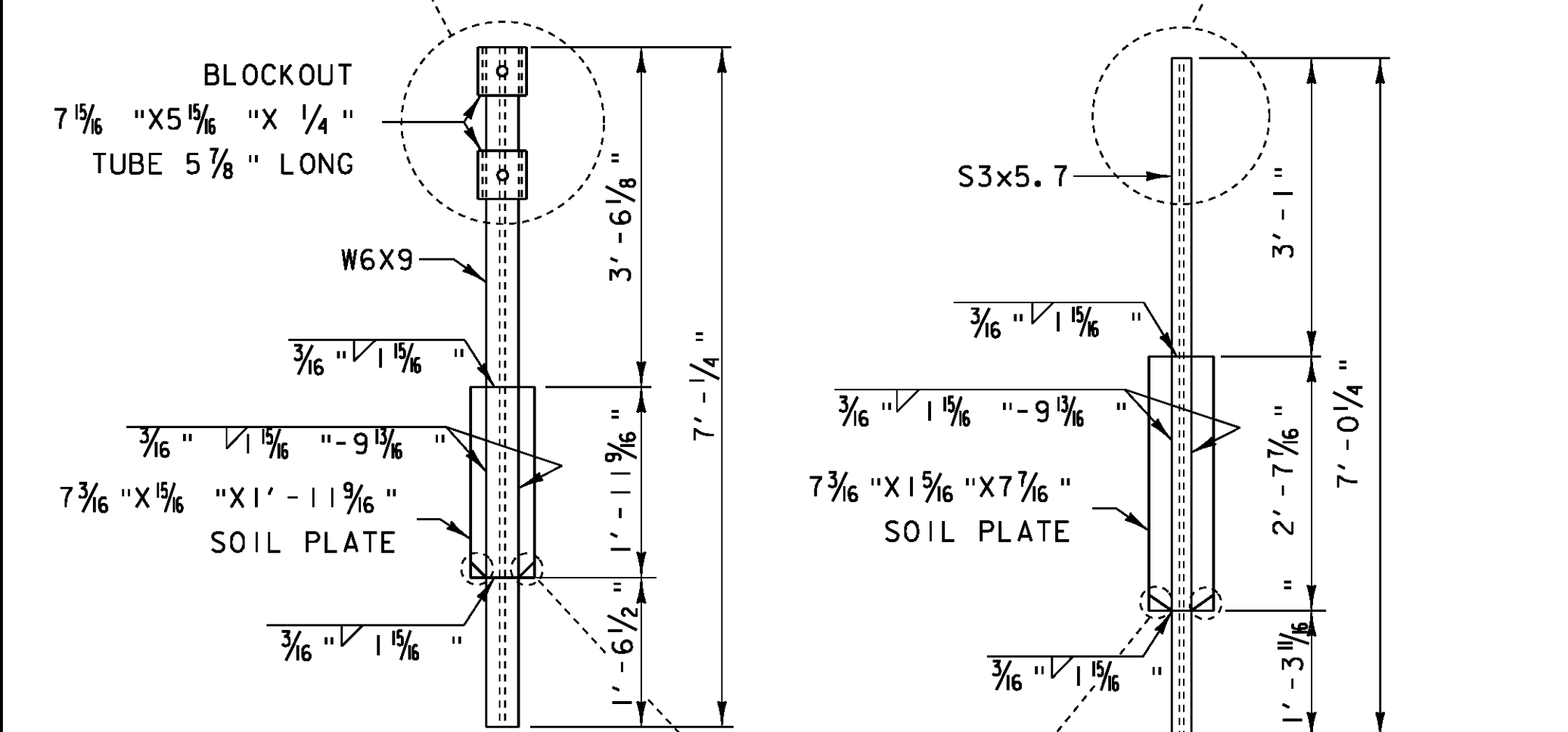
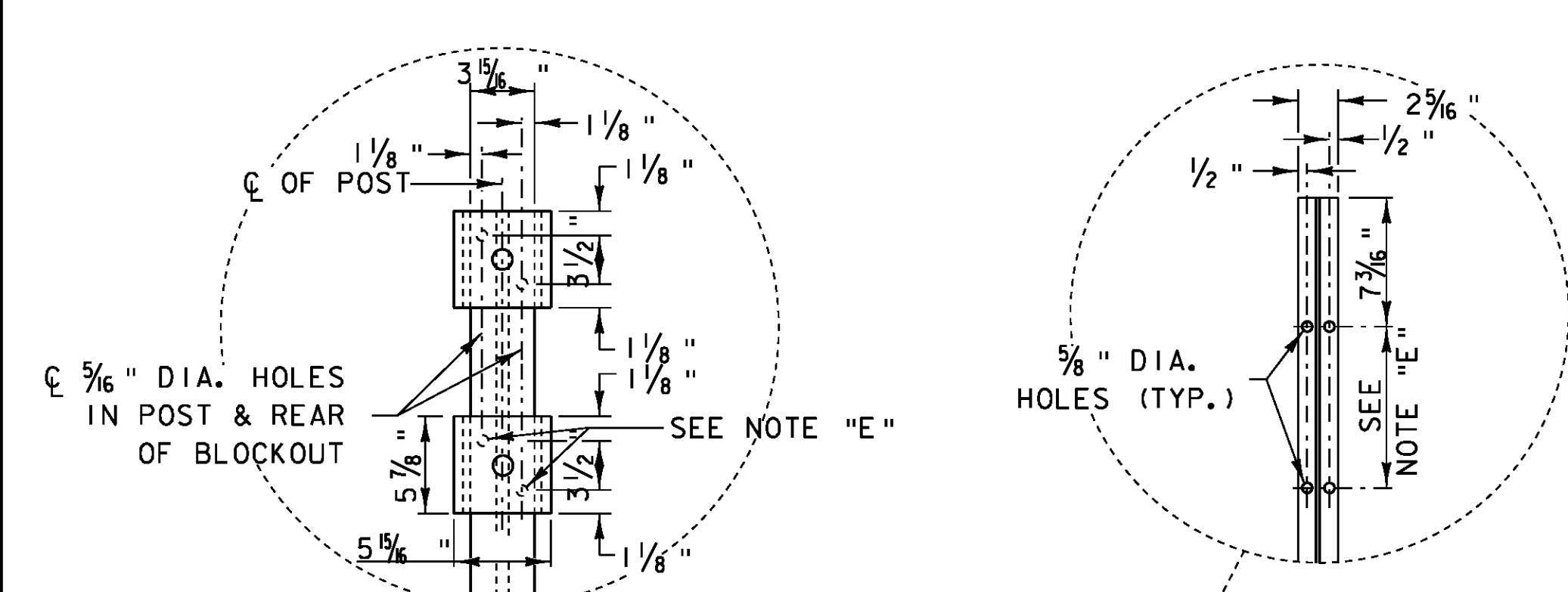
NOTE "D": PROTRUSIONS CAUSED BY WELDING OR GALVANIZING ARE NOT PERMITTED ON THE ADJOINING SURFACES OF THE BOX BEAM RAILS, SPLICE TUBES AND FILL PLATES.

DETAILS ON THE DRAWINGS LABELED AS "NOT TO SCALE" ARE INTENTIONALLY DRAWN NOT TO SCALE FOR VISUAL CLARITY. ALL OTHER DETAILS, FOR WHICH NO SCALE IS SHOWN, ARE DRAWN PROPORTIONAL AND ARE FULLY DIMENSIONED.

ALL DIMENSIONS ARE SHOWN IN FEET & INCHES UNLESS OTHERWISE NOTED.



| | |
|--------------------------------|------------------------|
| PROJECT NAME: JAMAICA | PLOT DATE: 17-DEC-2009 |
| PROJECT NUMBER: BRO 1442(27) | DRAWN BY: VTRANS |
| FILE NAME: s96j068r.dldet.dgn | CHECKED BY: VTRANS |
| PROJECT LEADER: K. HIGGINS | SHEET 3 OF 4 |
| DESIGNED BY: VTRANS | |
| BRIDGE RAILING DETAIL SHEET #3 | |

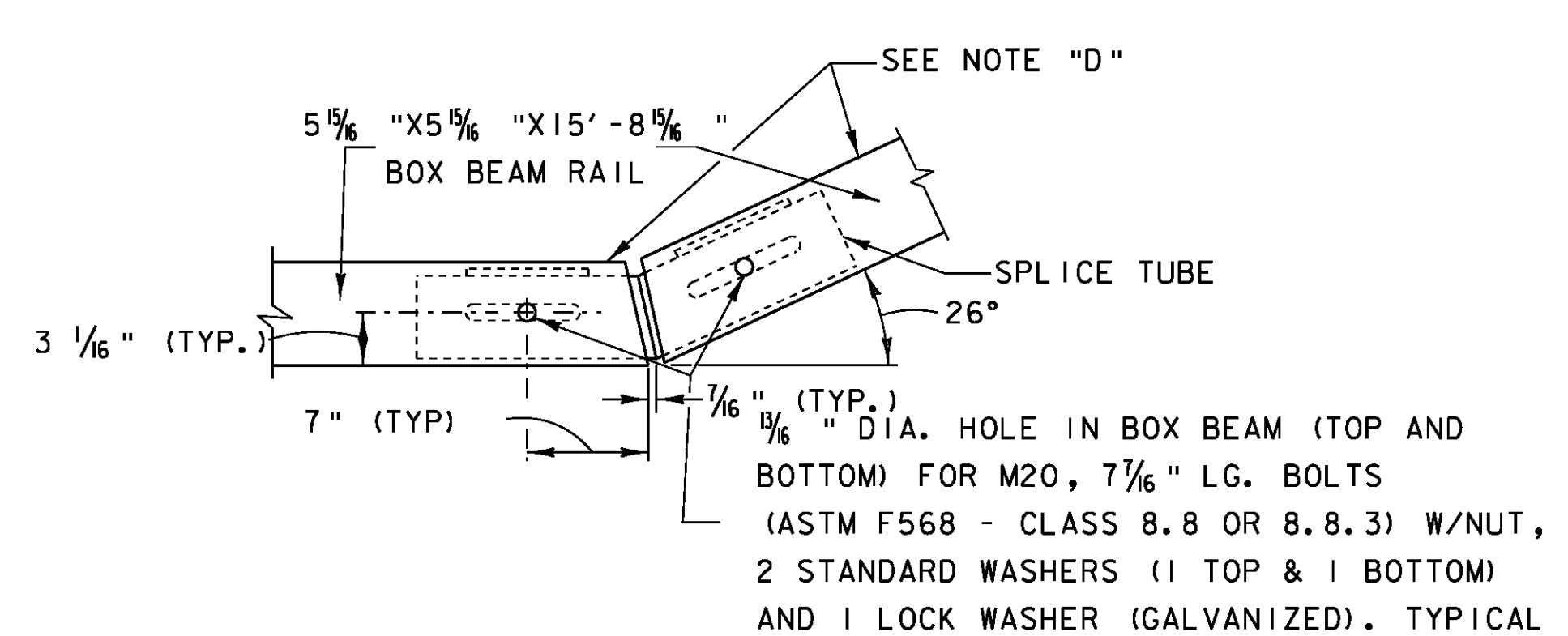
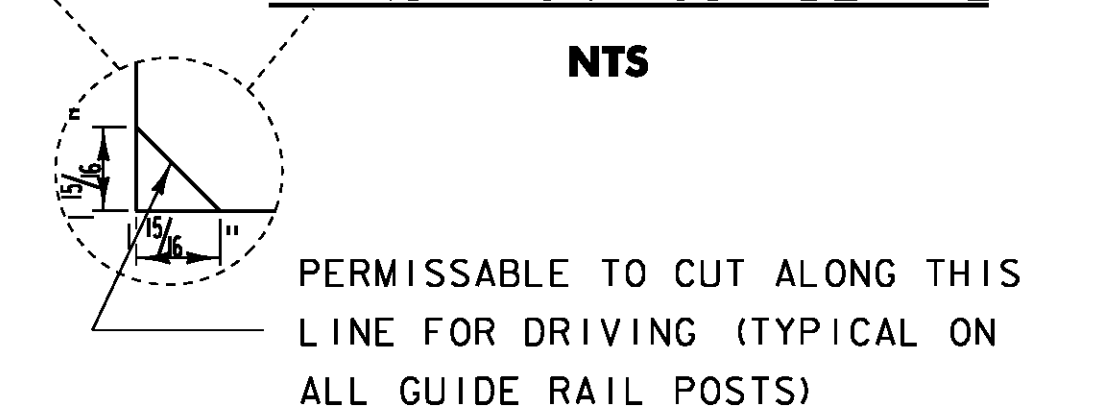


HEAVY POST DETAIL

TRANSITION POST DETAIL

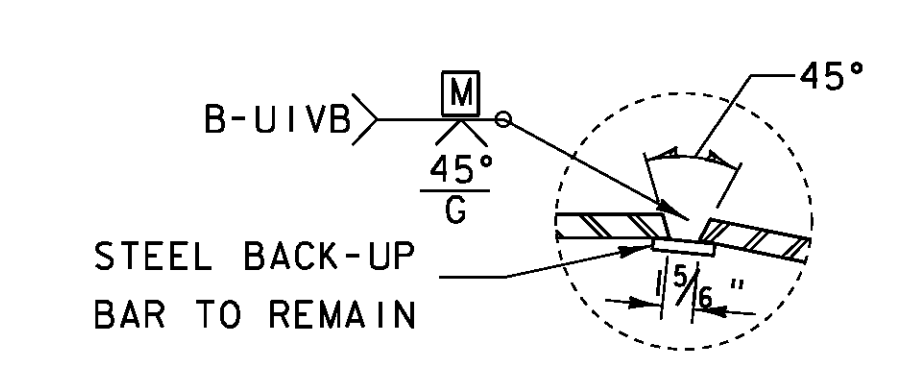
NTS

NTS



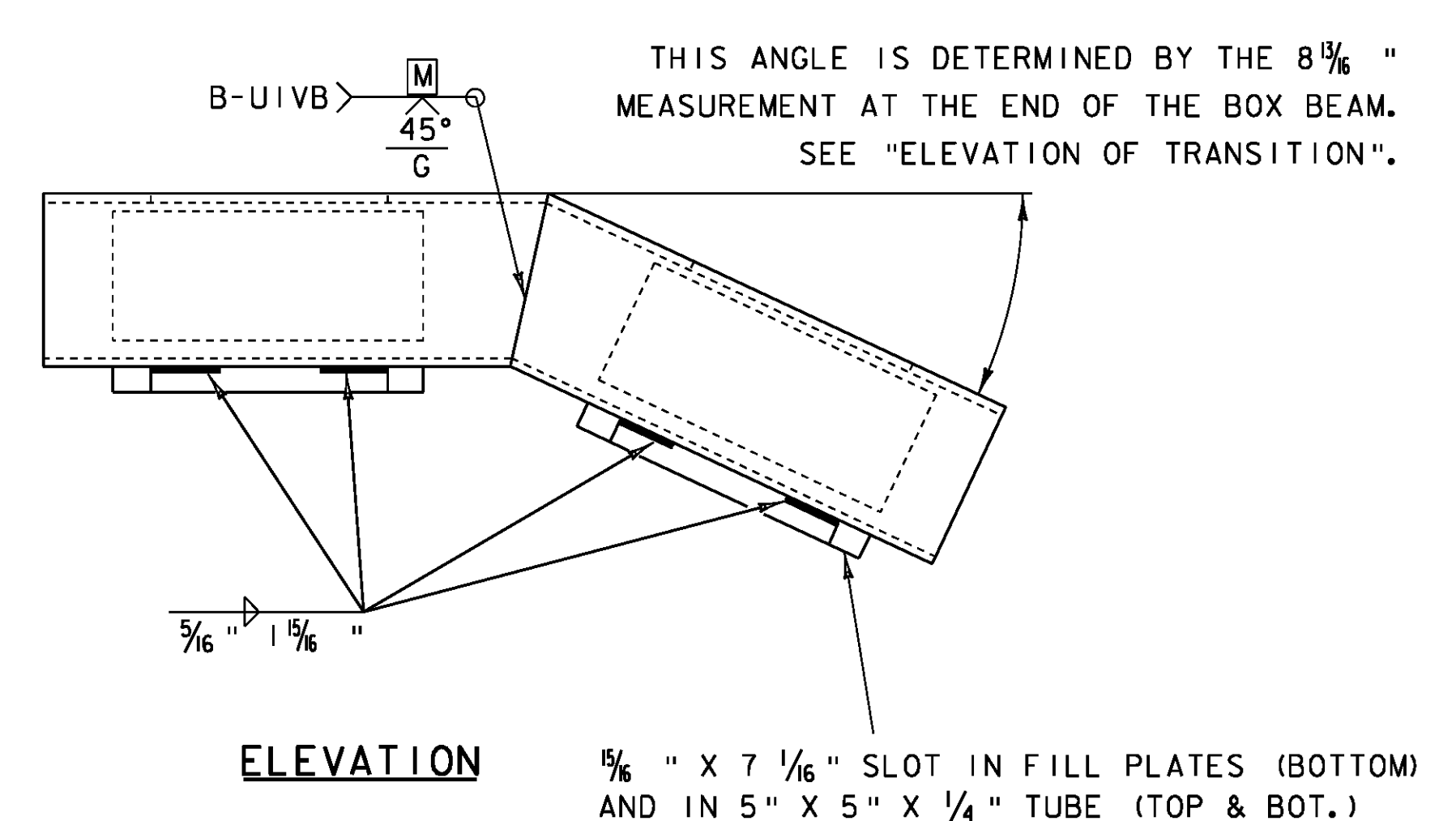
SPLICE DETAIL AT TURN BACK IN LOWER TRANSITION GUIDE RAIL

NTS



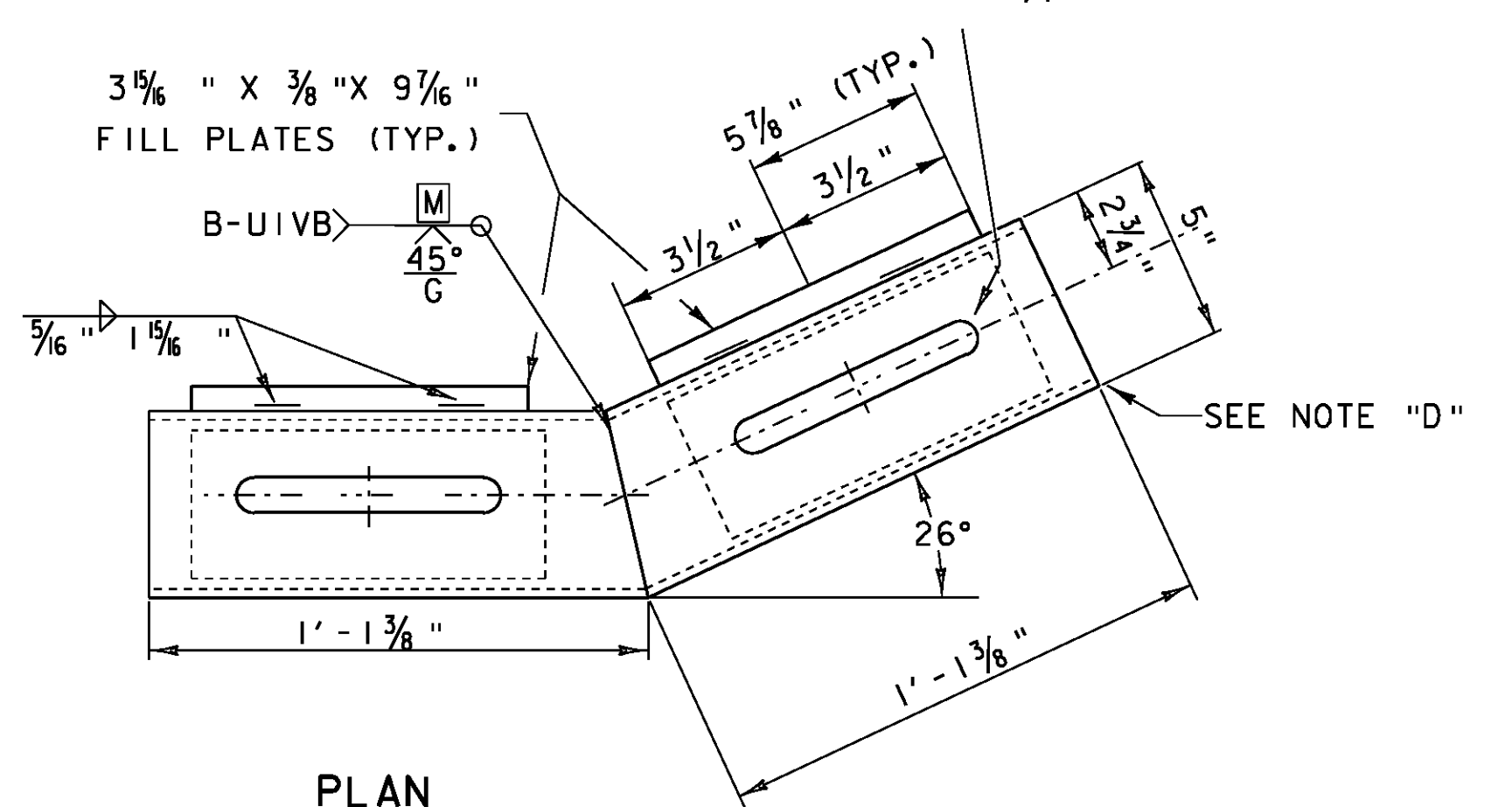
WELD DETAIL FOR SPLICE TUBE

NTS



ELEVATION

THIS ANGLE IS DETERMINED BY THE 8 1/2 " MEASUREMENT AT THE END OF THE BOX BEAM. SEE "ELEVATION OF TRANSITION".



PLAN

SPLICE TUBE DETAIL FOR TURN BACK

NTS

- NOTES:
- NOTE "D": PROTRUSIONS CAUSED BY WELDING OR GALVANIZING ARE NOT PERMITTED ON THE ADJOINING SURFACES OF THE BOX BEAM RAILS, SPLICE TUBES AND FILL PLATES.
 - NOTE "E": HOLES IN THE POST FOR THE LOWER RAIL MAY BE LOCATED AND DRILLED IN THE FIELD. IF SO, THE GALVANIZING SHALL BE REPAIRED IN ACCORDANCE WITH SECTION 525.
 - ALL DIMENSIONS ARE SHOWN IN FEET & INCHES UNLESS OTHERWISE NOTED.

| | |
|--------------------------------|--------------------|
| PROJECT NAME: | JAMAICA |
| PROJECT NUMBER: | BRO 1442(27) |
| FILE NAME: | s96j068rclldet.dgn |
| PROJECT LEADER: | K. HIGGINS |
| DESIGNED BY: | VTRANS |
| CHECKED BY: | VTRANS |
| BRIDGE RAILING DETAIL SHEET #4 | |
| PLOT DATE: | 17-DEC-2009 |
| DRAWN BY: | VTRANS |
| CHECKED BY: | VTRANS |
| SHEET | 4 OF 4 |

SOIL CLASSIFICATION

AASHTO

| | |
|----|-----------------------------------|
| A1 | Gravel and Sand |
| A3 | Fine Sand |
| A4 | Silty or Clayey Gravel and Sand |
| A2 | Silty Soil - Low Compressibility |
| A5 | Silty Soil - Highly Compressible |
| A6 | Clayey Soil - Low Compressibility |
| A7 | Clayey Soil - Highly Compressible |

ROCK QUALITY DESIGNATION

| R.Q.D. (%) | ROCK DESCRIPTION |
|------------|------------------|
| <25 | Very Poor |
| 25 to 50 | Poor |
| 51 to 75 | Fair |
| 76 to 90 | Good |
| >90 | Excellent |

SHEAR STRENGTH

| UNDRAINED SHEAR STRENGTH IN P.S.F. | CONSISTENCY |
|------------------------------------|-------------|
| <250 | Very Soft |
| 250-500 | Soft |
| 500-1000 | Med. Stiff |
| 1000-2000 | Stiff |
| 2000-4000 | Very Stiff |
| >4000 | Hard |

CORRELATION GUIDE OF "N" TO DENSITY/CONSISTENCY

| DENSITY (GRANULAR SOILS) | | CONSISTENCY (COHESIVE SOILS) | |
|--------------------------|------------------|------------------------------|------------------|
| N | DESCRIPTIVE TERM | N | DESCRIPTIVE TERM |
| <5 | Very Loose | <2 | Very Soft |
| 5-10 | Loose | 2-4 | Soft |
| 11-24 | Med. Dense | 5-8 | Med. Stiff |
| 25-50 | Dense | 9-15 | Stiff |
| >50 | Very Dense | 16-30 | Very Stiff |
| | | 31-60 | Hard |
| | | >60 | Very Hard |

COMMONLY USED SYMBOLS

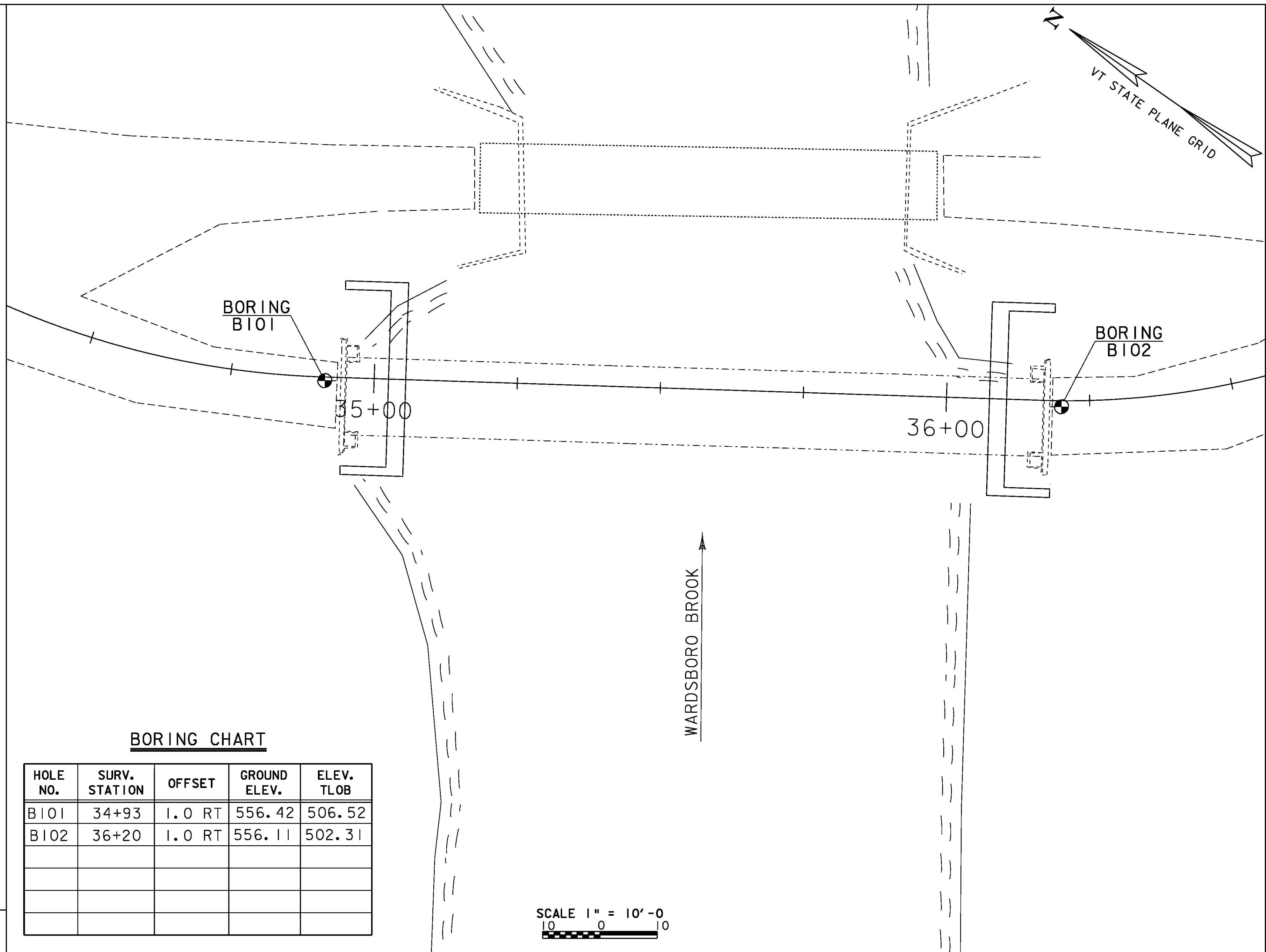
| | |
|-------|--|
| ▼ | Water Elevation |
| ⊕ | Standard Penetration Boring |
| ⊗ | Auger Boring |
| ⊙ | Rod Sounding |
| S | Sample |
| N | Standard Penetration Test Blow Count Per Foot For: 2" O.D. Sampler 1 3/8" I.D. Sampler Hammer Weight Of 140 Lbs. Hammer Fall Of 30" |
| VS | Field Vane Shear Test |
| US | Undisturbed Soil Sample |
| B | Blast |
| DC | Diamond Core |
| MD | Mud Drill |
| WA | Wash Ahead |
| HSA | Hollow Stem Auger |
| AX | Core Size 1 1/8" |
| BX | Core Size 1 3/8" |
| NX | Core Size 2 1/8" |
| M | Double Tube Core Barrel Used |
| LL | Liquid Limit |
| PL | Plastic Limit |
| PI | Plasticity Index |
| NP | Non Plastic |
| w | Moisture Content (Dry Wgt. Basis) |
| D | Dry |
| M | Moist |
| MTW | Moist To Wet |
| W | Wet |
| Sat | Saturated |
| Bo | Boulder |
| Gr | Gravel |
| Sa | Sand |
| Sl | Silt |
| Cl | Clay |
| HP | Hardpan |
| Le | Ledge |
| NLTD | No Ledge To Depth |
| CNPF | Can Not Penetrate Further |
| TLOB | To Ledge Or Boulder |
| NR | No Recovery |
| Rec. | Recovery |
| %Rec. | Percent Recovery |
| RQD | Rock Quality Designation |
| CBR | California Bearing Ratio |
| < | Less Than |
| > | Greater Than |
| R | Refusal (N > 100) |

COLOR

| | | | |
|-----|--------|------|--------------|
| blk | Black | pnk | Pink |
| bl | Blue | pu | Purple |
| brn | Brown | rd | Red |
| dk | Dark | tn | Tan |
| gry | Gray | wh | White |
| gn | Green | yel | Yellow |
| lt | Light | mltc | Multicolored |
| or | Orange | | |

DEFINITIONS (AASHTO)

| | |
|---|---|
| BEDROCK (LEDGE) - Rock in its native location of indefinite thickness. | VARVED - Alternate layers of silt and clay. |
| BOULDER - A rock fragment with an average dimension > 12 inches. | HARDPAN - Extremely dense soil, cemented layer, not softened when wet. |
| COBBLE - Rock fragments with an average dimension between 3 and 12 inches. | MUCK - Soft organic soil (containing > 10% organic material). |
| GRAVEL - Rounded particles of rock < 3" and > 0.075" (#10 sieve). | MOISTURE CONTENT - Weight of water divided by dry weight of soil. |
| SAND - Particles of rock < 0.075" (#10 sieve) and > 0.0029" (#200 sieve). | FLOWING SAND - Granular soil so saturated (loose) that it flows into drill casing during extraction of wash rod. |
| SILT - Soil < 0.0029" (#200 sieve), non or slightly plastic and exhibits no strength when air-dried. | STRIKE - Angle from magnetic north to line of intersection of bed with a horizontal plane. |
| CLAY - Fine grained soil, exhibits plasticity when moist and considerable strength when air-dried. | DIP - Inclination of bed with a horizontal plane. |



BORING CHART

| HOLE NO. | SURV. STATION | OFFSET | GROUND ELEV. | ELEV. TLOB |
|----------|---------------|--------|--------------|------------|
| B101 | 34+93 | 1.0 RT | 556.42 | 506.52 |
| B102 | 36+20 | 1.0 RT | 556.11 | 502.31 |
| | | | | |
| | | | | |
| | | | | |

SCALE 1" = 10'-0"
10 0 10

GENERAL NOTES

- The subsurface explorations shown herein were made between 6/24/07 and 5/31/07 by the Agency.
- Soil and rock classifications, properties and descriptions are based on engineering interpretation from available subsurface information by the Agency and may not necessarily reflect actual variations in subsurface conditions that may be encountered between individual boring or sample locations.
- Observed water levels and/or conditions indicated are as recorded at the time of exploration and may vary according to the prevailing rainfall, methods of exploration and other factors.
- Engineering judgment was exercised in preparing the subsurface information presented herein. Analysis and interpretation of subsurface data was performed and interpreted for Agency design and estimating purposes. Presentation of the information in the Contract is intended to provide the Contractor access to the same data available to the Agency. The subsurface information is presented in good faith and is not intended as a substitute for personal investigation, independent interpretation, independent analysis or judgment by the Contractor.
- Pictorial structure details shown on the boring plan layout or soils profile are for illustrative purposes only and may not accurately portray final contract details.
- Terminology used on boring logs to describe the hardness, degree of weathering, and spacing of fractures, joints and other discontinuities in the bedrock is defined in the AASHTO Manual on Subsurface Investigations, 1988.

| | | | |
|-----------------|----------------|-------------|-------------|
| PROJECT NAME: | JAMAICA | PLOT DATE: | 19-OCT-2009 |
| PROJECT NUMBER: | BRO 1442(27) | DRAWN BY: | R. PELLETT |
| FILE NAME: | s961068bor.dgn | CHECKED BY: | J. LACROIX |
| PROJECT LEADER: | K. HIGGINS | SHEET | 14 OF 44 |
| DESIGNED BY: | J. LACROIX | | |
| BORING LAYOUT | | | |

| STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION | | BORING NUMBER: B-101 SHEET 1 of 1 DATE STARTED: 5/31/07 DATE COMPLETED: 6/07/07 | | | | | |
|--|--------|---|----------------|----------|------------|-----------|--------------------------|
| PROJECT NAME: JAMAICA SITE NAME: TH-43 STATION: 34+93 OFFSET: 1.00 VTSPG: N 208604.63 ft E 1577801.71 ft | | PROJECT NUMBER: BRO 1442(27) SITE NUMBER: BR-33 GROUND ELEVATION: 556.42 ft GROUNDWATER DEPTH: 13.8 ft 6/07/07 PROJECT PIN NUMBER: 96J068 | | | | | |
| BORING CREW CREW CHIEF: GARROW DRILLER: GARROW LOGGER: CARRIERE | | BORING RIG: LARGE SKID RIG w/AUTO HAMMER BORING TYPE: WASH BORE SAMPLE TYPE: SPLIT BARREL CHECKED BY: CAA | | | | | |
| DEPTH (ft) | SYMBOL | CLASSIFICATION OF MATERIALS (Description) | BLOWS PER FOOT | M.C. (%) | GRAVEL (%) | SAND (%) | FINES (%) |
| | | | RUN | REC (%) | RQD (%) | Dip (deg) | Drill Rate (min/ft) |
| | | Visual Classification: Coarse sand withleaves, roots, & grass, brn, Moist, Rec. = 0.3 ft | 3 | 6.0 | 32.6 | 64.8 | 2.6 |
| | | A-1-b, GrSa, brn, Moist, Rec. = 0.8 ft | | | | | |
| | | NXDC, Cored ahead into Cobbles and advanced casing, 2.9 ft - 5.0 ft | | | | | |
| | | A-1-b, GrSa, brn, MTW, Rec. = 0.6 ft | 6 | 12.9 | 42.1 | 49.1 | 8.8 |
| 10 | | NXDC, Cleaned out casing, 9.3 ft - 10.0 ft | 6 | 11.0 | 53.7 | 39.8 | 6.5 |
| | | A-1-a, SaGr, gry, MTW, Rec. = 0.75 ft | | | | | |
| | | NXDC, Cored ahead into Cobbles and advanced casing, 13.7 ft - 18.7 ft | | | | | |
| 20 | | A-2-4, Sa, Lt/brn, MTW, Rec. = 1.0 ft | 16 | 22.0 | 0.8 | 82.0 | 17.2 |
| | | A-3, Sa, brn, MTW, Rec. = 1.2 ft, Used drillers mud. | 16 | 24.7 | 0.8 | 89.3 | 9.9 |
| 30 | | A-2-4, SiSa, gry-brn, Moist, Rec. = 1.3 ft | 20 | 23.5 | 0.0 | 74.5 | 25.5 |
| | | NXDC, Cored ahead into Boulder, 33.9 ft - 35.9 ft | | | | | |
| 40 | | A-4, SaSi, Lt/brn, Moist, Rec. = 1.5 ft | 30 | 23.2 | 13.6 | 36.7 | 49.7 |
| | | NXDC, Cobbles, Cleaned out casing, 42.7 ft - 45.0 ft | | | | | |
| | | A-1-b, SaGr, brn, Moist, Rec. = 1.0 ft | 66 | 9.8 | 44.3 | 43.0 | 12.7 |
| 50 | | Top of Bedrock @ 49.9 ft | | | | | |
| | | Gray with some pink, Gneiss, Competent, Very hard, Unweathered, NXMDC, 49.9 ft - 54.9 ft, Rec. = 4.35 ft | 1 | 87 | 72 | 10 | 14 12 11 9 9 |
| | | Gray with some pink, Gneiss, Competent, Very hard, Unweathered, NXMDC, 54.9 ft - 59.9 ft, Rec. = 4.55 ft | 2 | 91 | 91 | 15 | 6 8 9 8 8 |
| 60 | | Hole stopped @ 59.9 ft | | | | | |

ABUTMENT #1
BOTTOM OF STEM
ELEV. 547.00

PILE DEPTH
(ESTIMATED)
ELEV. 506.50

LOG OF BORING JAMAICA BRO 1442(27).DGN VT DOT.GDT 9/29/07

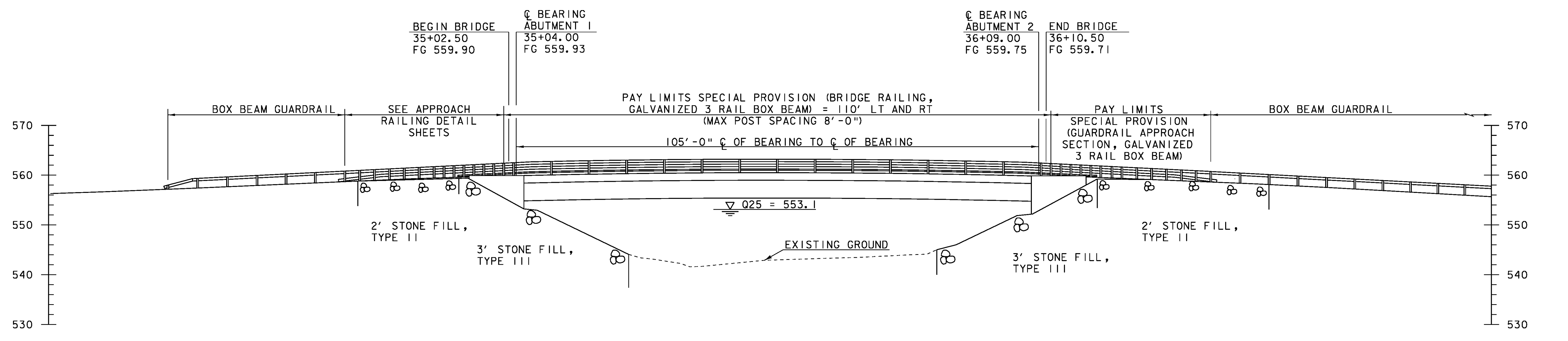
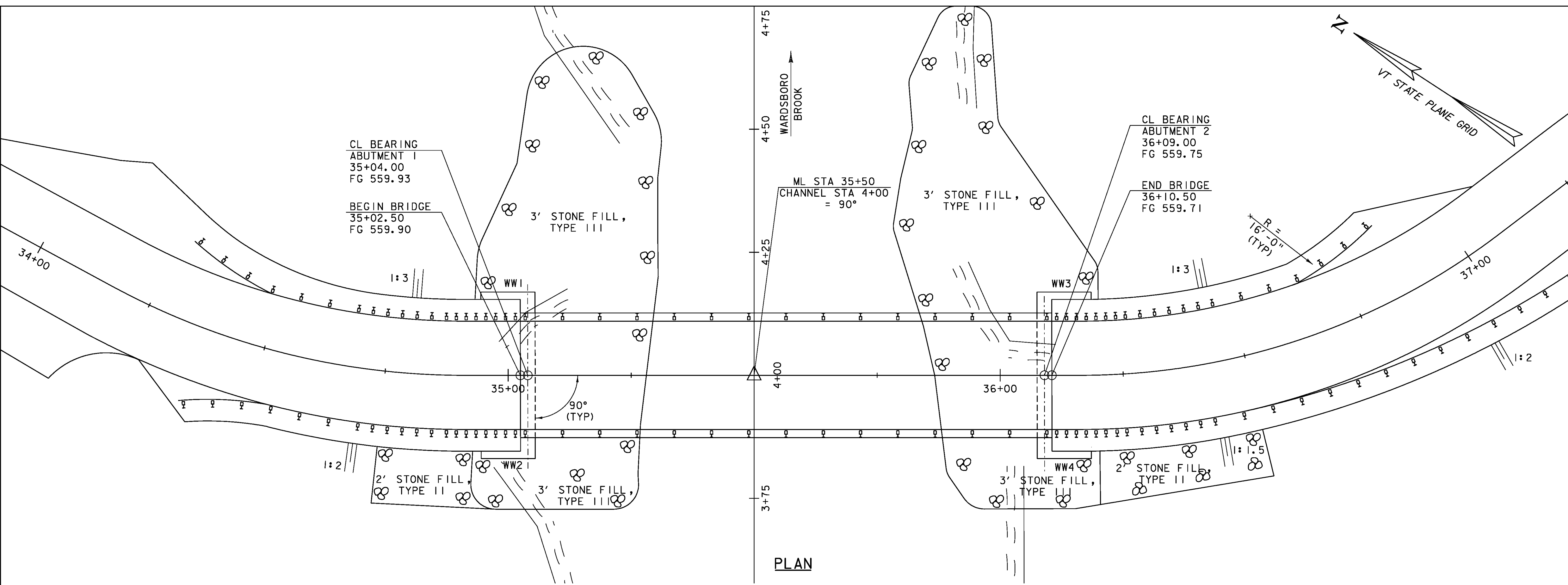
| STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION | | BORING NUMBER: B-102 SHEET 1 of 1 DATE STARTED: 5/24/07 DATE COMPLETED: 5/31/07 | | | | | |
|--|--------|--|----------------|----------|------------|-----------|----------------------------|
| PROJECT NAME: JAMAICA SITE NAME: TH-43 STATION: 36+20 OFFSET: 1.00 VTSPG: N 208496.66 ft E 1577871.81 ft | | PROJECT NUMBER: BRO 1442(27) SITE NUMBER: BR-33 GROUND ELEVATION: 556.11 ft GROUNDWATER DEPTH: Hole caved in at 11.0' PROJECT PIN NUMBER: 96J068 | | | | | |
| BORING CREW CREW CHIEF: GARROW DRILLER: GARROW LOGGER: CARRIERE | | BORING RIG: LARGE SKID RIG w/AUTO HAMMER BORING TYPE: WASH BORE SAMPLE TYPE: SPLIT BARREL CHECKED BY: CAA | | | | | |
| DEPTH (ft) | SYMBOL | CLASSIFICATION OF MATERIALS (Description) | BLOWS PER FOOT | M.C. (%) | GRAVEL (%) | SAND (%) | FINES (%) |
| | | | RUN | REC (%) | RQD (%) | Dip (deg) | Drill Rate (min/ft) |
| | | A-2-4, GrSa, brn, Moist, Rec. = 1.3 ft | 11 | 6.3 | 30.7 | 54.8 | 14.5 |
| | | A-2-4, GrSa, brn, Moist, Rec. = 0.7 ft | 10 | 13.2 | 35.1 | 52.3 | 12.6 |
| 10 | | NXDC, Cleaned out casing, 9.0 ft - 10.0 ft | 17 | | | | |
| | | No Recovery, 10.0 ft - 12.0 ft | | | | | |
| | | NXDC, Cored ahead into Boulder and cleaned out casing, 13.4 ft - 15.4 ft | R | | | | |
| | | NXMDC, Cored ahead into Boulder, 15.4 ft - 18.4 ft | | | | | |
| 20 | | NXDC, Cleaned out casing, 19.0 ft - 20.0 ft | 31 | 11.7 | 43.6 | 44.9 | 11.5 |
| | | A-1-b, GrSa, brn, MTW, Rec. = 1.2 ft | | | | | |
| | | NXDC, Cleaned out casing, 24.5 ft - 25.0 ft | R | 11.4 | 40.9 | 43.2 | 15.9 |
| | | A-1-b, GrSa, brn, Moist, Rec. = 0.6 ft | | | | | |
| | | NXDC, Cored ahead into Cobbles, 25.4 ft - 28.4 ft | | | | | |
| 30 | | NXDC, Cored ahead into Boulders, 29.6 ft - 32.6 ft | | | | | |
| | | NXDC, Cleaned out casing, 33.0 ft - 34.5 ft | R | 12.5 | 28.6 | 37.9 | 33.5 |
| | | A-2-4, GrSiSa, brn, Moist, Rec. = 1.1 ft | | | | | |
| | | NXDC, Cored ahead into Boulders, 36.7 ft - 40.0 ft | | | | | |
| 40 | | A-2-4, SiSa, brn, Moist, Rec. = 1.6 ft | 64 | 15.4 | 18.4 | 55.2 | 26.4 |
| | | A-2-4, GrSiSa, brn, Moist, Rec. = 0.6 ft | R | 10.9 | 26.1 | 44.7 | 29.2 |
| | | NXMDC, Cored ahead into Boulder, 45.6 ft - 47.6 ft | | | | | |
| 50 | | NXMDC, Cleaned out casing, 49.1 ft - 50.0 ft | R | 11.8 | 27.2 | 57.6 | 15.2 |
| | | A-2-4, GrSa, brn, Moist, Rec. = 1.1 ft | | | | | |
| | | Top of Bedrock @ 53.8 ft | | | | | |
| | | Gray with some pink, Gneiss, Competent, Very hard, Unweathered, NXMDC, 53.8 ft - 58.8 ft, Rec. = 4.8 ft | 1 | 96 | 93 | 10 | 10 12 15 12 13 |
| 60 | | Gray with some pink, Gneiss, Competent, Quartz zone from 60.6 ft - 61.4 ft, Very hard, Unweathered, NXMDC, 58.8 ft - 63.8 ft, Rec. = 5.0 ft | 2 | 100 | 100 | 10 | 9 12 15 15 13 |
| | | Hole stopped @ 63.8 ft | | | | | |

ABUTMENT #2
BOTTOM OF STEM
ELEV. 547.00

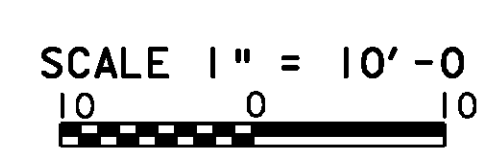
PILE DEPTH
(ESTIMATED)
ELEV. 502.30

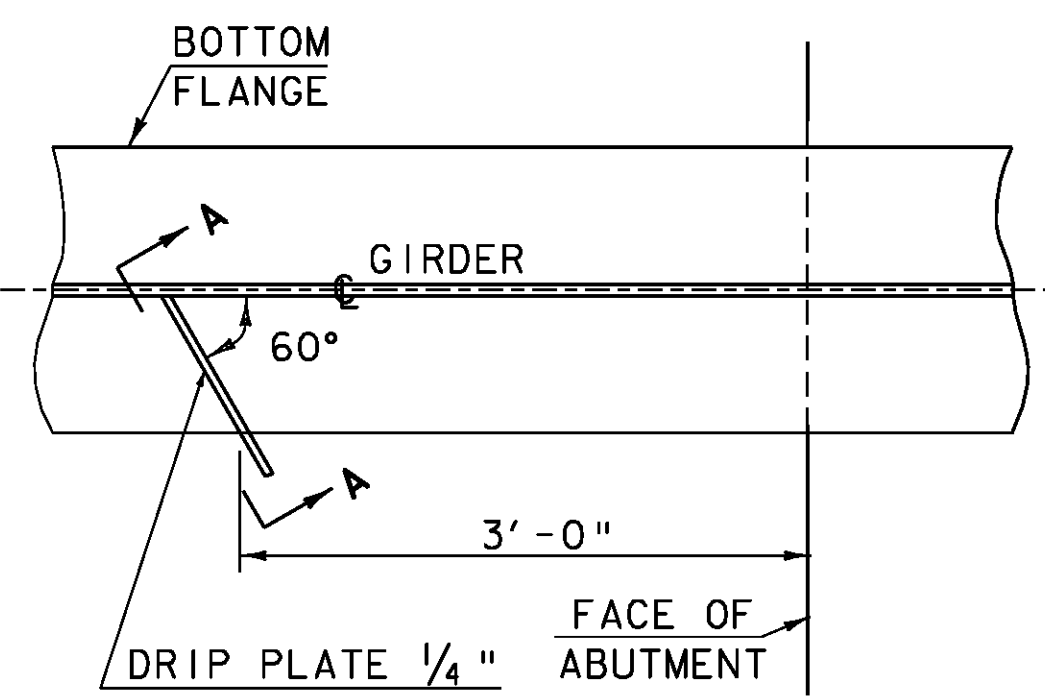
LOG OF BORING JAMAICA BRO 1442(27).DGN VT DOT.GDT 9/29/07

PROJECT NAME: JAMAICA
PROJECT NUMBER: BRO 1442(27)
FILE NAME: s96J068bor.dgn
PROJECT LEADER: K .HIGGINS
DESIGNED BY: J. LACROIX
BORING LOGS
PLOT DATE: 19-OCT-2009
DRAWN BY: R. PELLETT
CHECKED BY: J. LACROIX
SHEET 15 OF 44



| | | | | | |
|-----------------|--------------|--------------------|---------------|-------------|-------------|
| PROJECT NAME: | JAMAICA | FILE NAME: | s96j068pe.dgn | PLOT DATE: | 03-NOV-2009 |
| PROJECT NUMBER: | BRO 1442(27) | PROJECT LEADER: | K. HIGGINS | DRAWN BY: | R. PELLETT |
| | | DESIGNED BY: | J. LACROIX | CHECKED BY: | J. LACROIX |
| | | PLAN AND ELEVATION | | SHEET 16 | OF 44 |

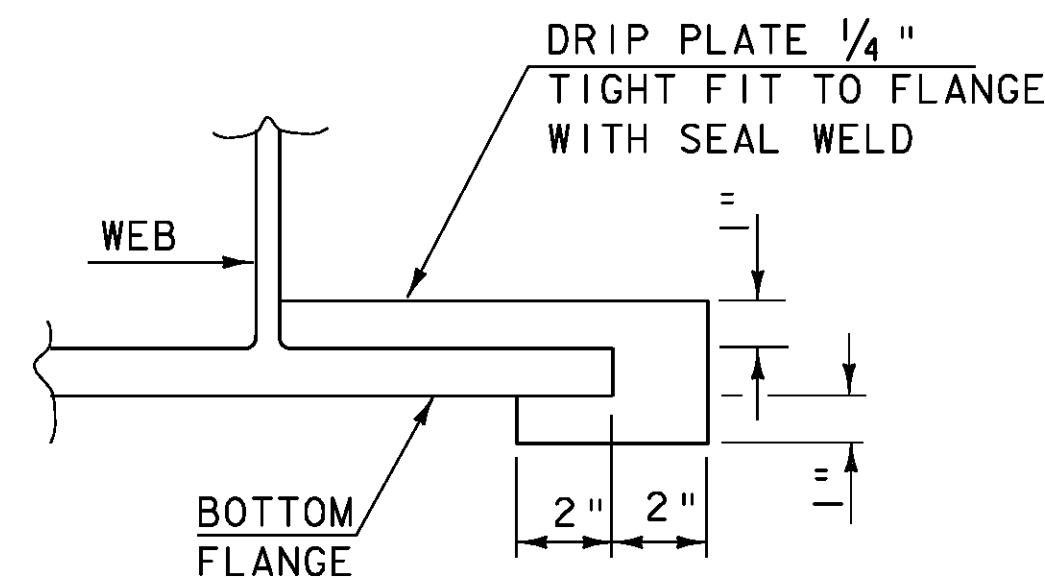




PLAN DRIP PLATE

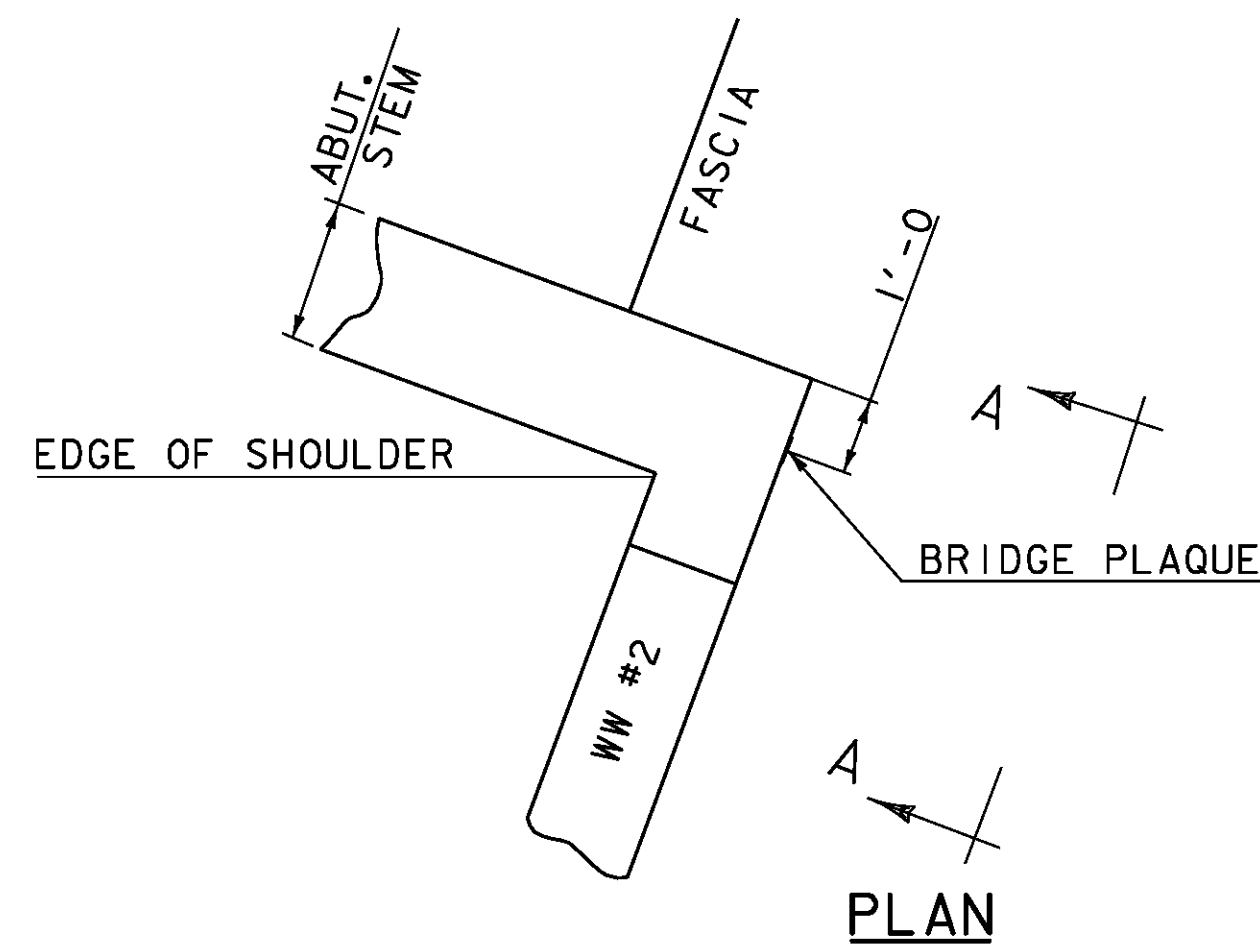
(NOT TO SCALE)

NOTE: DRIP PLATES SHALL BE PLACED ON OUTSIDE EDGE OF FASCIA GIRDERS ON THE HIGH SIDE OF ALL PIERS AND ABUTMENTS OR AS INDICATED ON PROJECT PLANS.

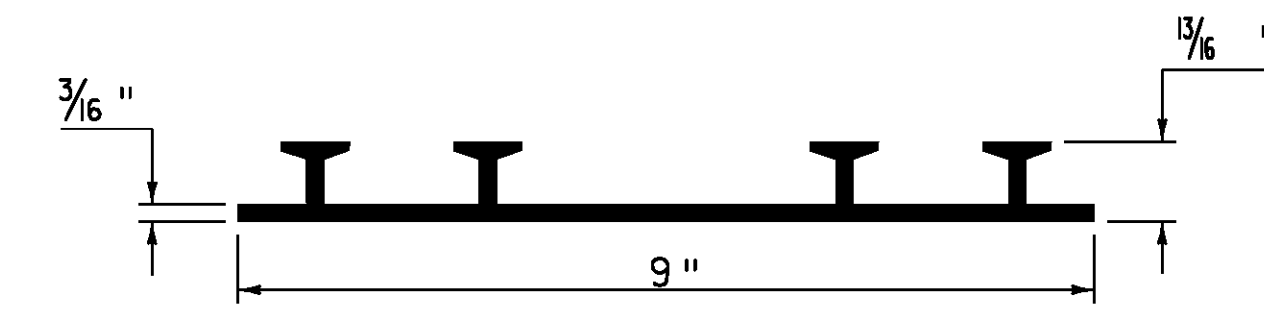


SECTION A-A

(NOT TO SCALE)



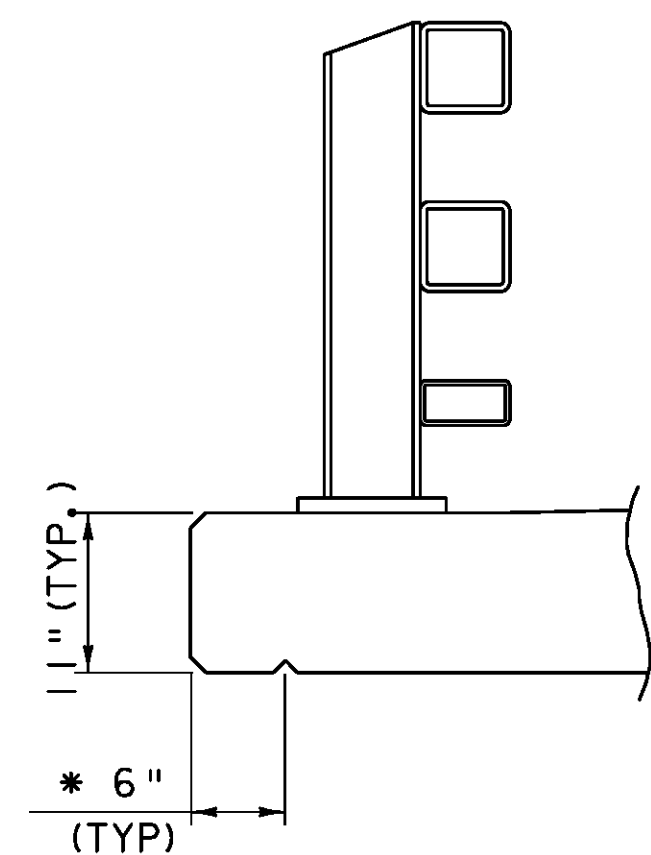
PLAN



P.V.C. WATERSTOP FOR CONSTRUCTION JOINTS
(NOT TO SCALE)

PAYMENT FOR THE P.V.C. WATERSTOP SHALL BE INCIDENTAL TO THE UNIT BID PRICE FOR THE ADJACENT CONCRETE.

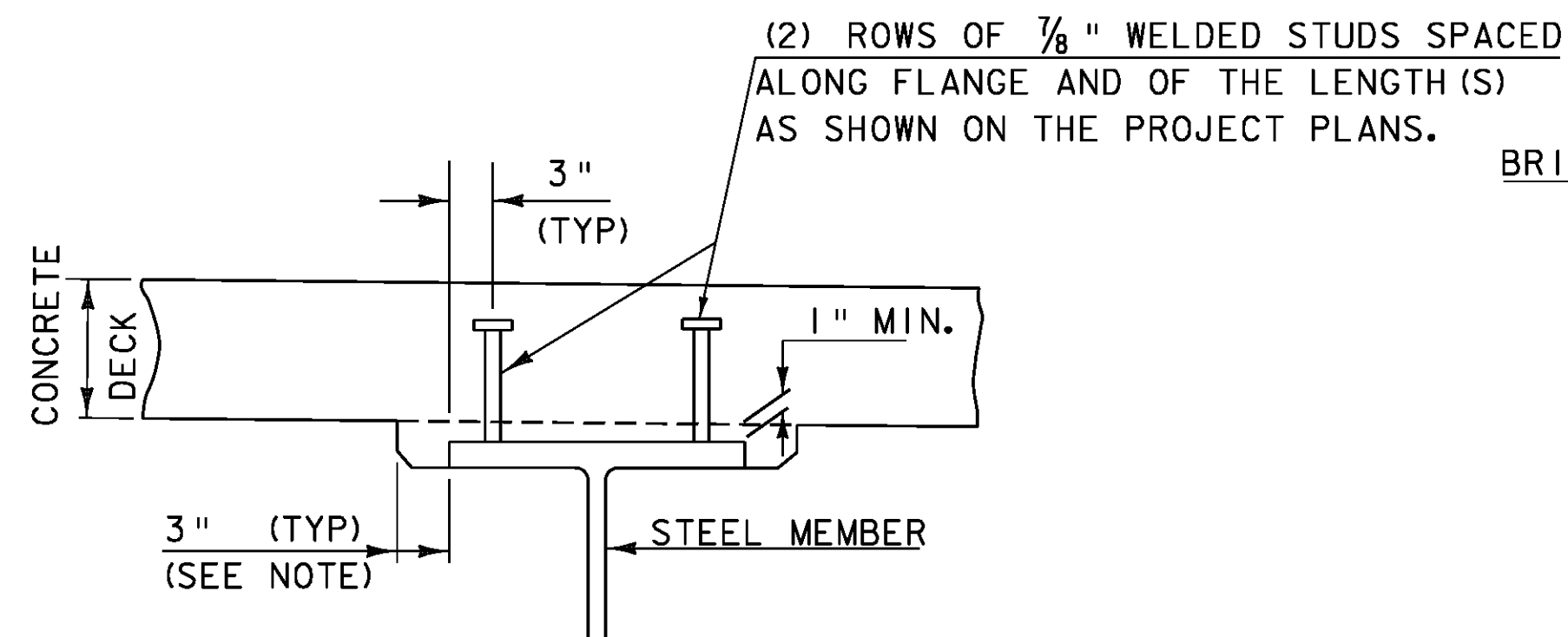
OTHER CONFIGURATIONS OF WATERSTOP MAY BE USED UPON APPROVAL OF THE ENGINEER.



DRIP NOTCH DETAIL

(NOT TO SCALE)

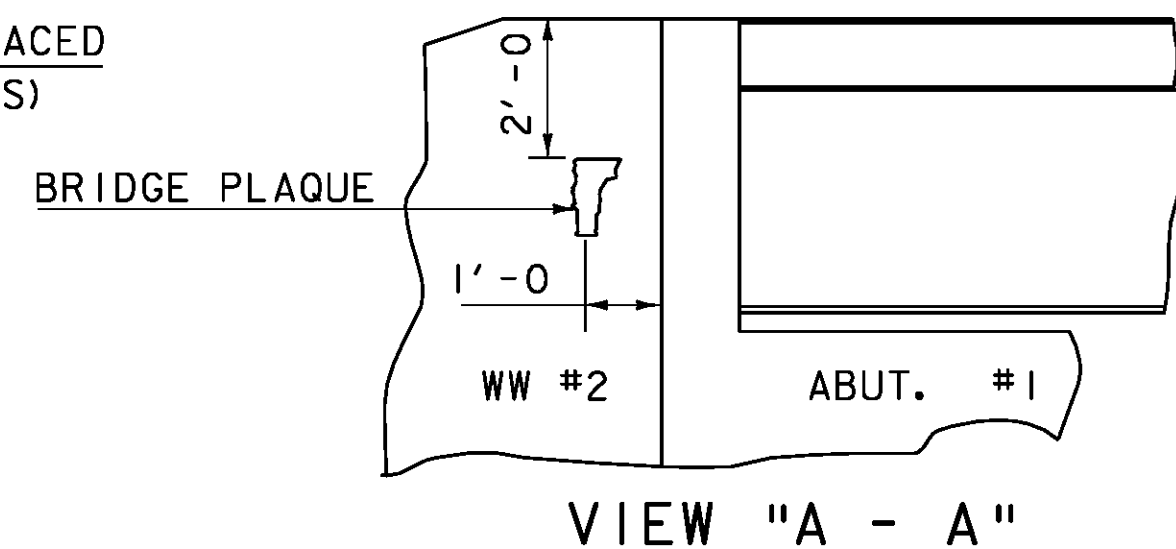
* 3/4" to 2" DRIP NOTCH STOP DRIP NOTCH 3' FROM FACE OF ABUTMENT AND OUTLET @ 45 DEGREES TO FASCIA



HAUNCH AND SHEAR CONNECTOR DETAIL

(NOT TO SCALE)

NOTE: THE 3" HORIZONTAL SECTION MAY BE ELIMINATED FOR FORMING SYSTEMS DESIGNED FOR THE CONSTRUCTION OF VERTICAL HAUNCHES. ANY VOIDS RESULTING FROM FORMING SYSTEM ELEMENTS SHALL BE FILLED WITH JOINT SEALER, POLYURETHANE MEETING THE REQUIREMENTS OF SECTION 524. THE COST OF THE JOINT SEALER, POLYURETHANE SHALL BE INCIDENTAL TO THE ADJACENT CONCRETE.

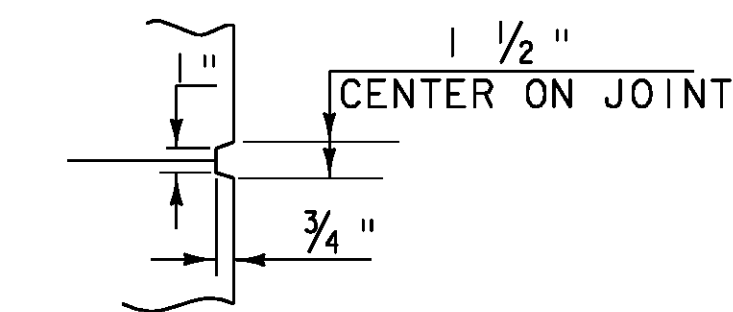


BRIDGE PLAQUE

(NOT TO SCALE)

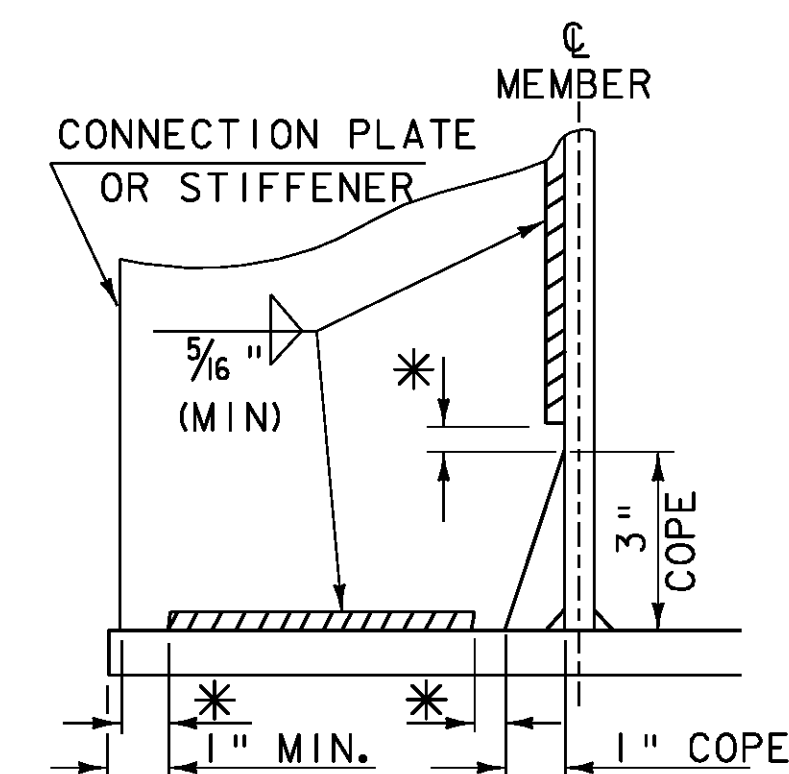
THE BRIDGE PLAQUE WILL BE SUPPLIED BY THE AGENCY OF TRANSPORTATION AND SHALL BE INSTALLED BY THE CONTRACTOR AT ABUTMENT #1 ON THE RIGHT SIDE AS SHOWN OR AS DIRECTED BY THE ENGINEER.

PAYMENT FOR INSTALLATION OF THE BRIDGE PLAQUE SHALL BE INCIDENTAL TO THE ADJACENT CONCRETE.



SCORE MARK DETAIL

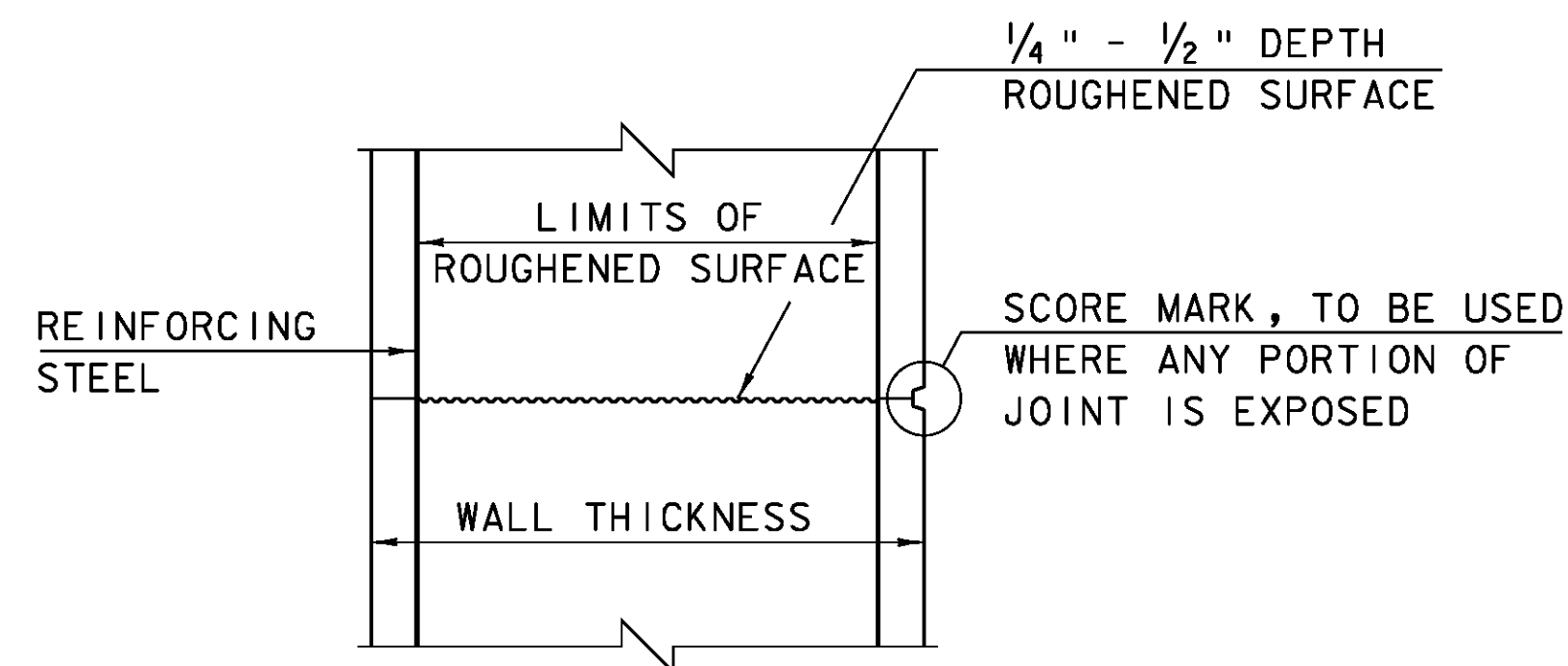
(NOT TO SCALE)



WELD TERMINATION AND COPING DETAILS FOR STEEL MEMBERS

(NOT TO SCALE)

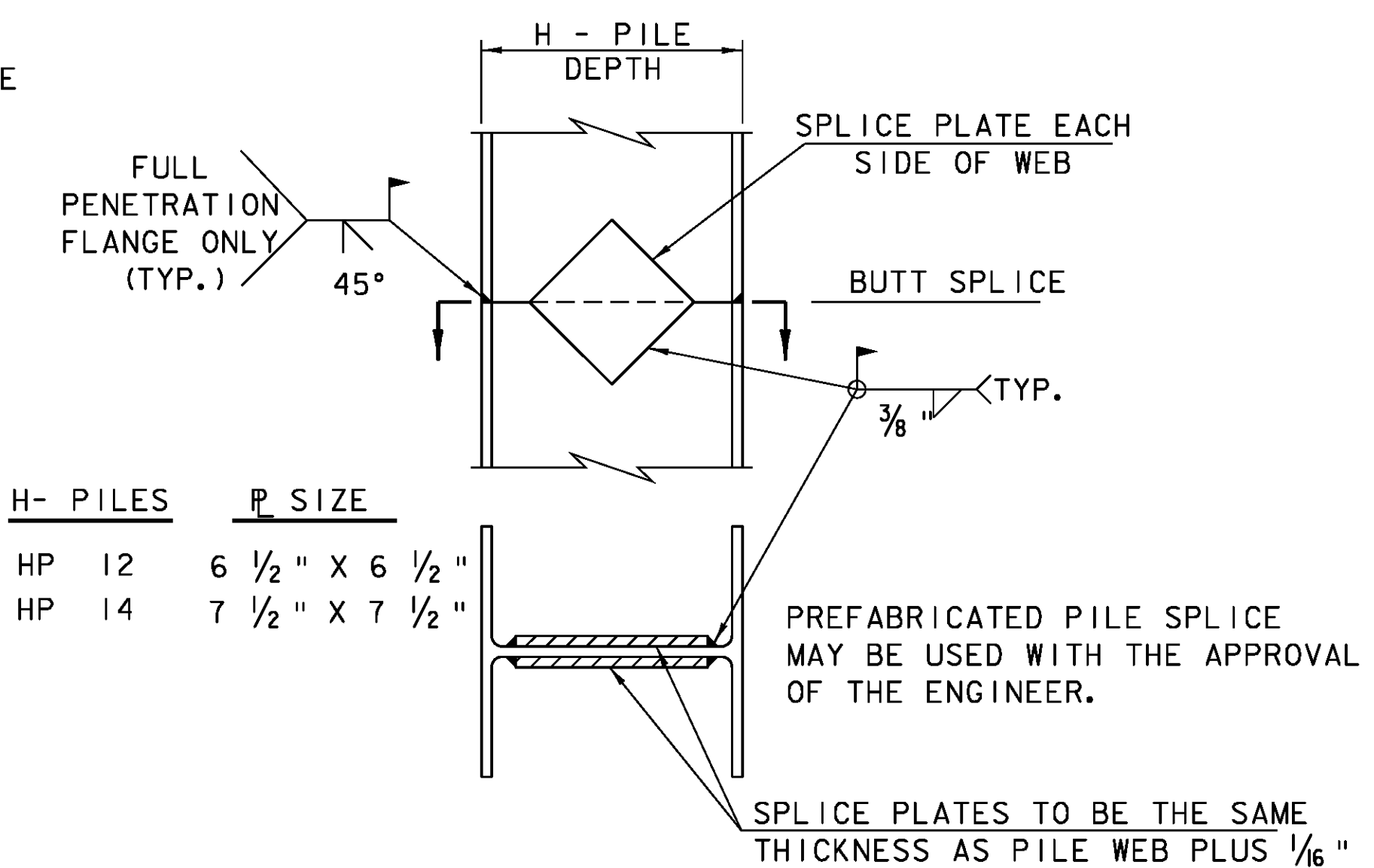
* NO WELD FOR 3/8" MIN. 7/8" MAX. (EXCEPT MUST MAINTAIN 1" MINIMUM FROM EDGE OF FLANGE)



TYPICAL HORIZONTAL CONSTRUCTION JOINT

(NOT TO SCALE)

1. THE SURFACE OF THE CONCRETE CONSTRUCTION JOINTS SHALL BE CLEANED AND FREE OF LAITANCE.
2. IMMEDIATELY BEFORE NEW CONCRETE IS PLACED, ALL CONSTRUCTION JOINTS SHALL BE WETTED AND STANDING WATER REMOVED.



DETAIL OF PILE SPLICE

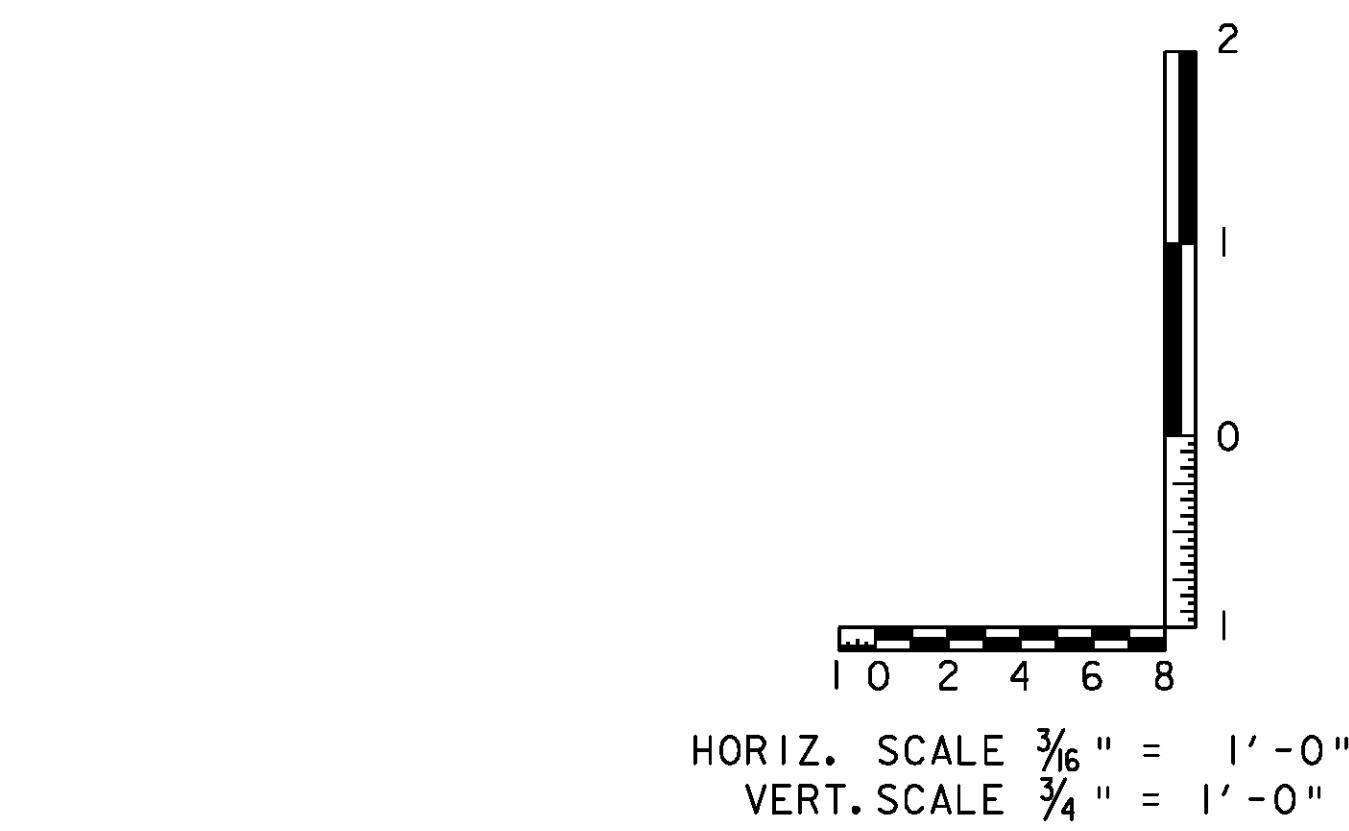
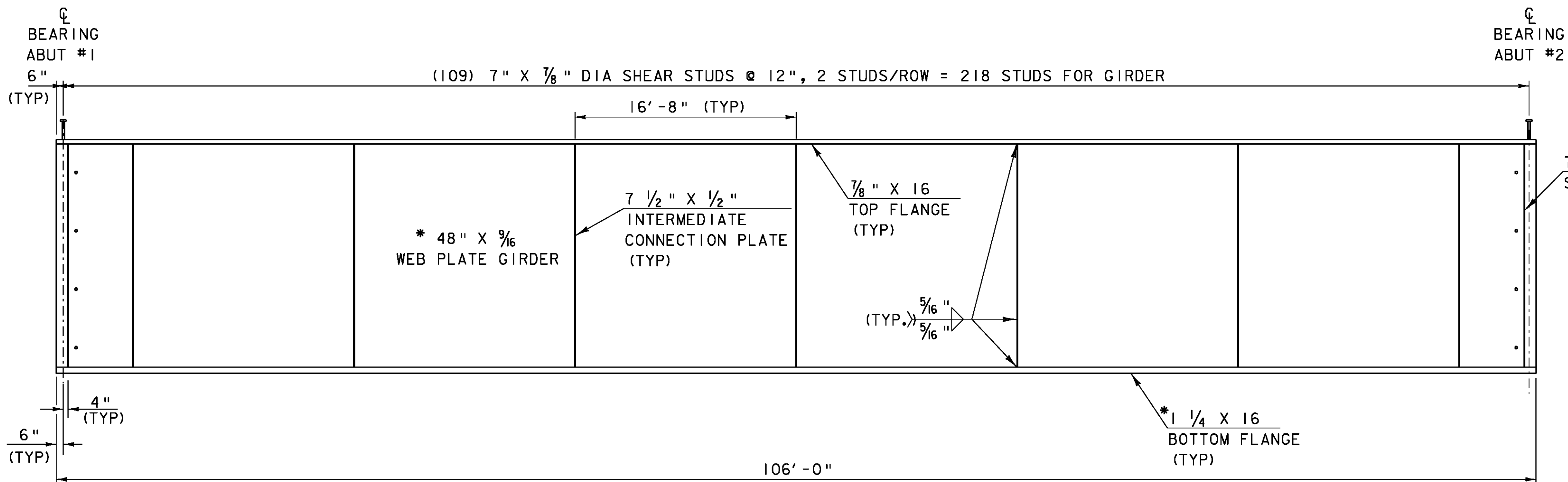
(NOT TO SCALE)

| H- PILES | P SIZE |
|----------|-----------------|
| HP 12 | 6 1/2" X 6 1/2" |
| HP 14 | 7 1/2" X 7 1/2" |

PROJECT NAME: JAMAICA
PROJECT NUMBER: BRO 1442(27)

FILE NAME: s96j068det.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. LACROIX
MISCELLANEOUS DETAILS

PLOT DATE: 19-OCT-2009
DRAWN BY: K. PATTERSON
CHECKED BY: J. LACROIX
SHEET 18 OF 44

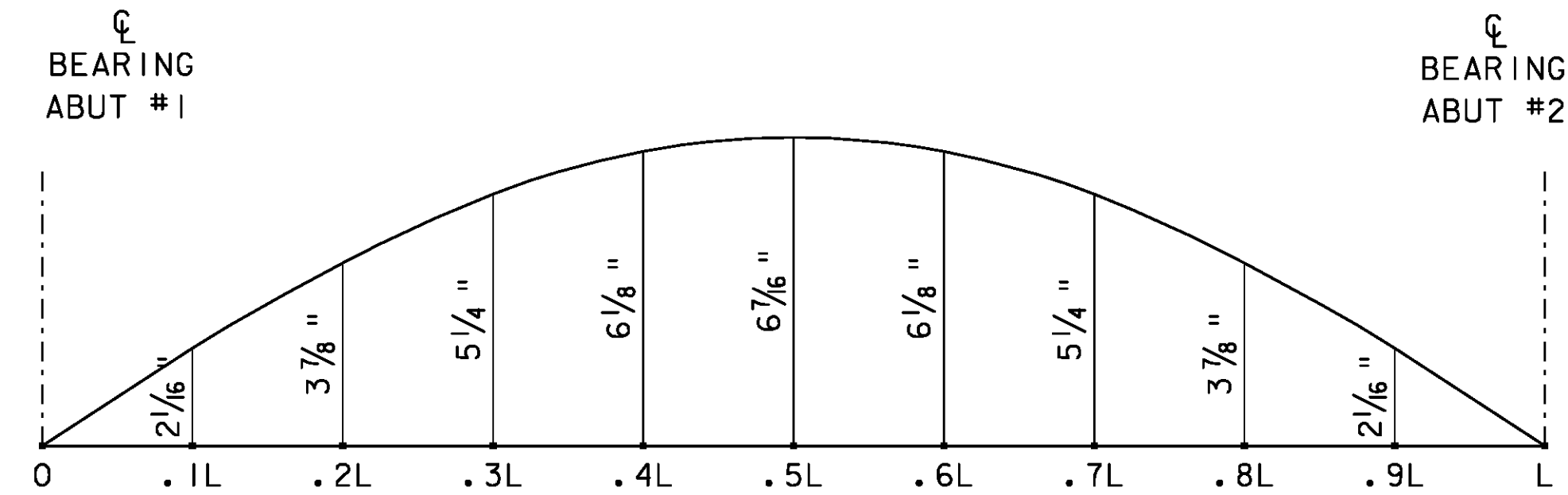


FRAMING PLAN

*DENOTES FRACTURE CRITICAL MEMBER
SEE GENERAL NOTES

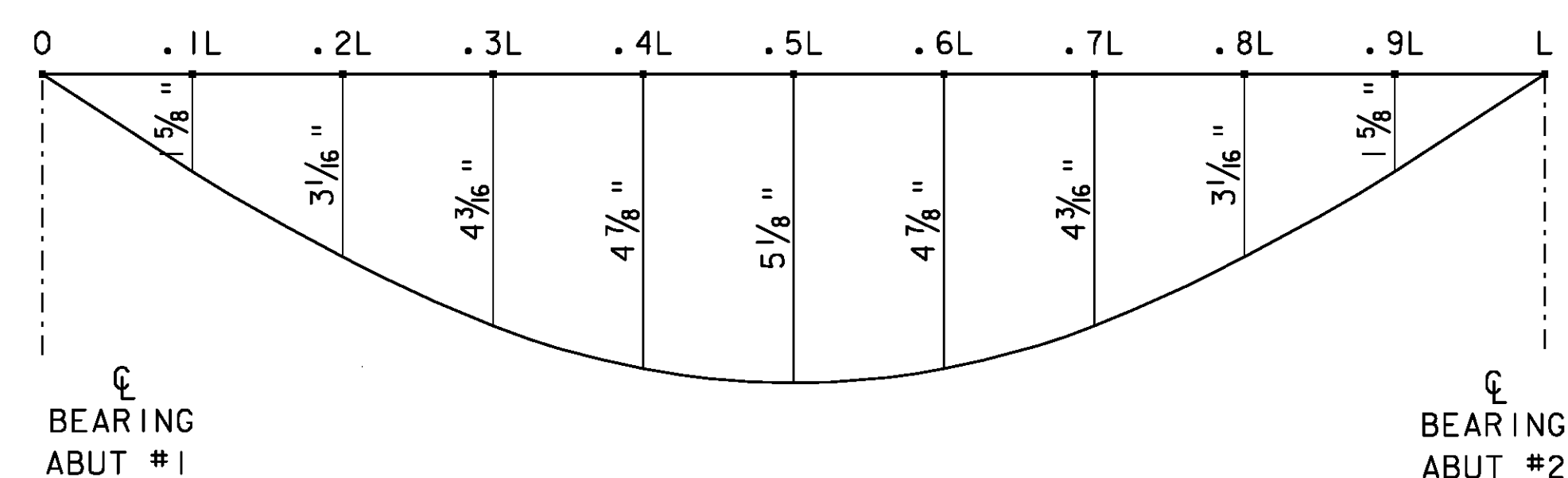
FRAMING PLAN

SCALE 3/16" = 1'-0"



CAMBER DIAGRAM

SCALE 3/32" = 1'-0"

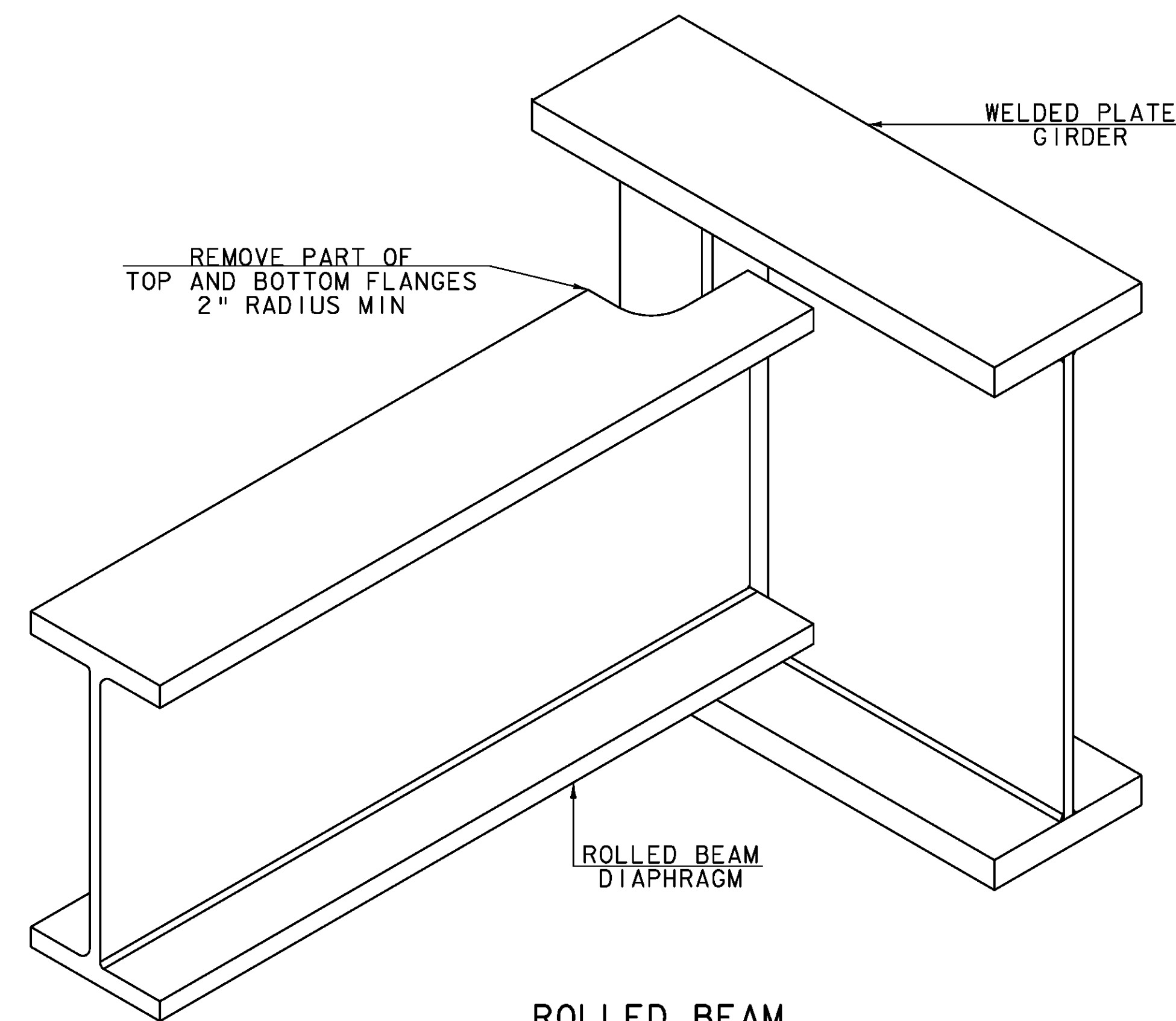


DEAD LOAD DEFLECTION DIAGRAM

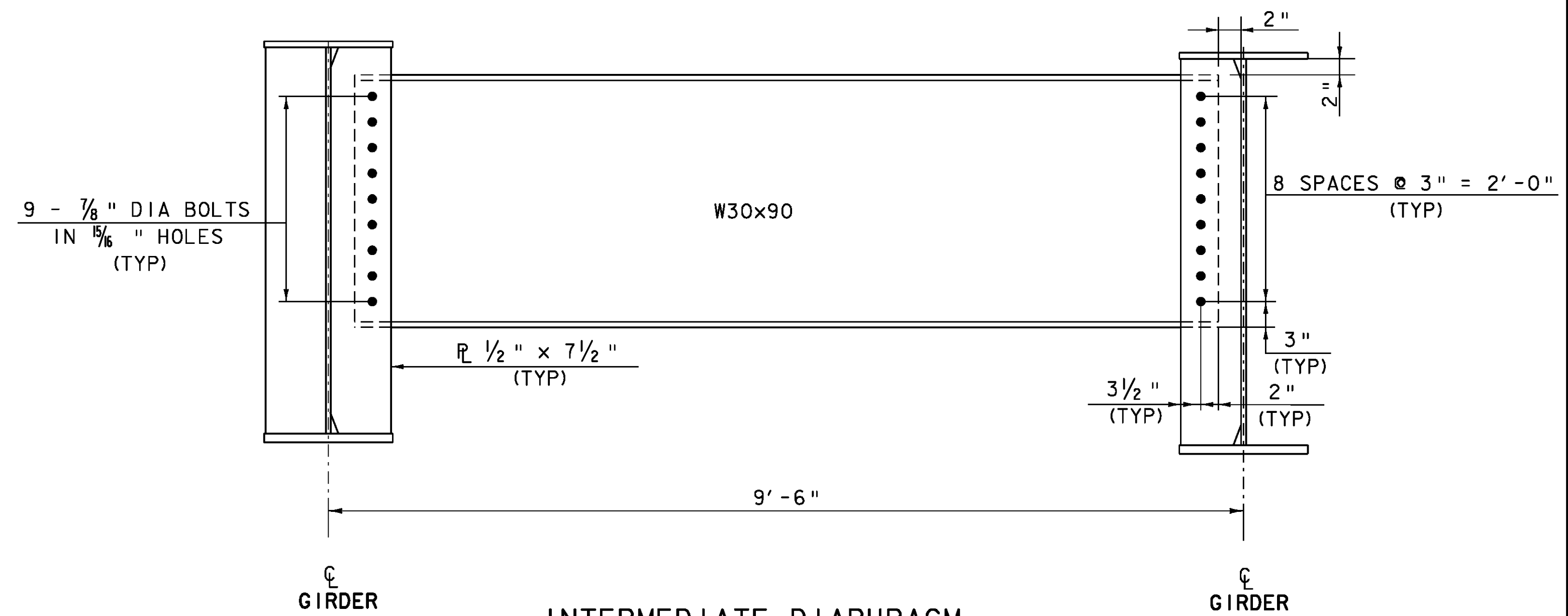
NOTE: DEAD LOAD DEFLECTION INCLUDES
THE GIRDER SELF-WEIGHT.

SCALE 3/32" = 1'-0"

| | |
|-------------------------------|------------------------|
| PROJECT NAME: JAMAICA | |
| PROJECT NUMBER: BRO 1442(27) | |
| FILE NAME: s96J068de+.dgn | PLOT DATE: 19-OCT-2009 |
| PROJECT LEADER: K. HIGGINS | DRAWN BY: R. PELLETT |
| DESIGNED BY: J. LACROIX | CHECKED BY: J. LACROIX |
| FRAMING PLAN & CAMBER DIAGRAM | SHEET 19 OF 44 |

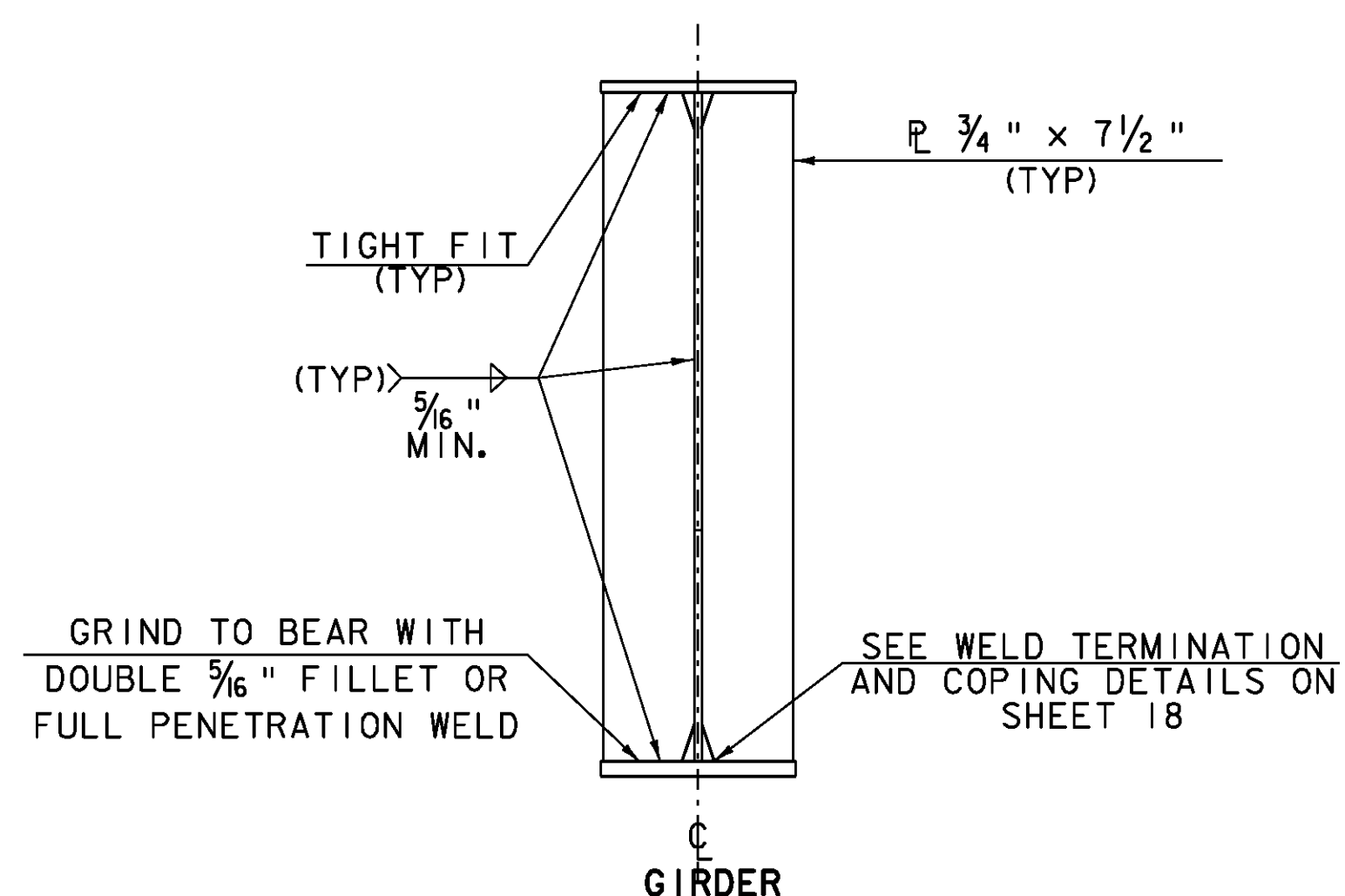


**ROLLED BEAM
USED AS DIAPHRAGM**



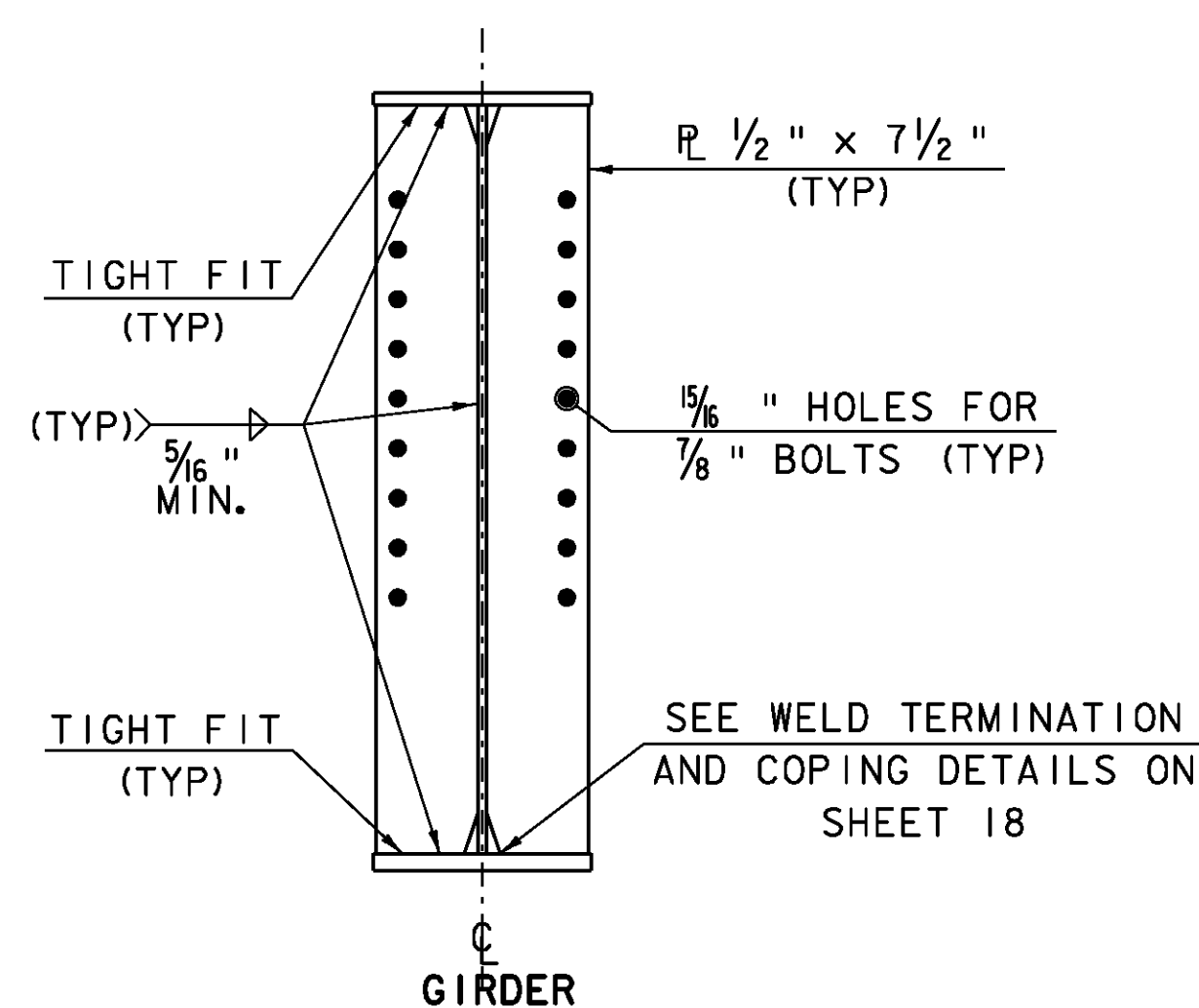
INTERMEDIATE DIAPHRAGM

SCALE 1" = 1'-0"
1 9 6 3 0 2



ABUTMENT BEARING STIFFENER

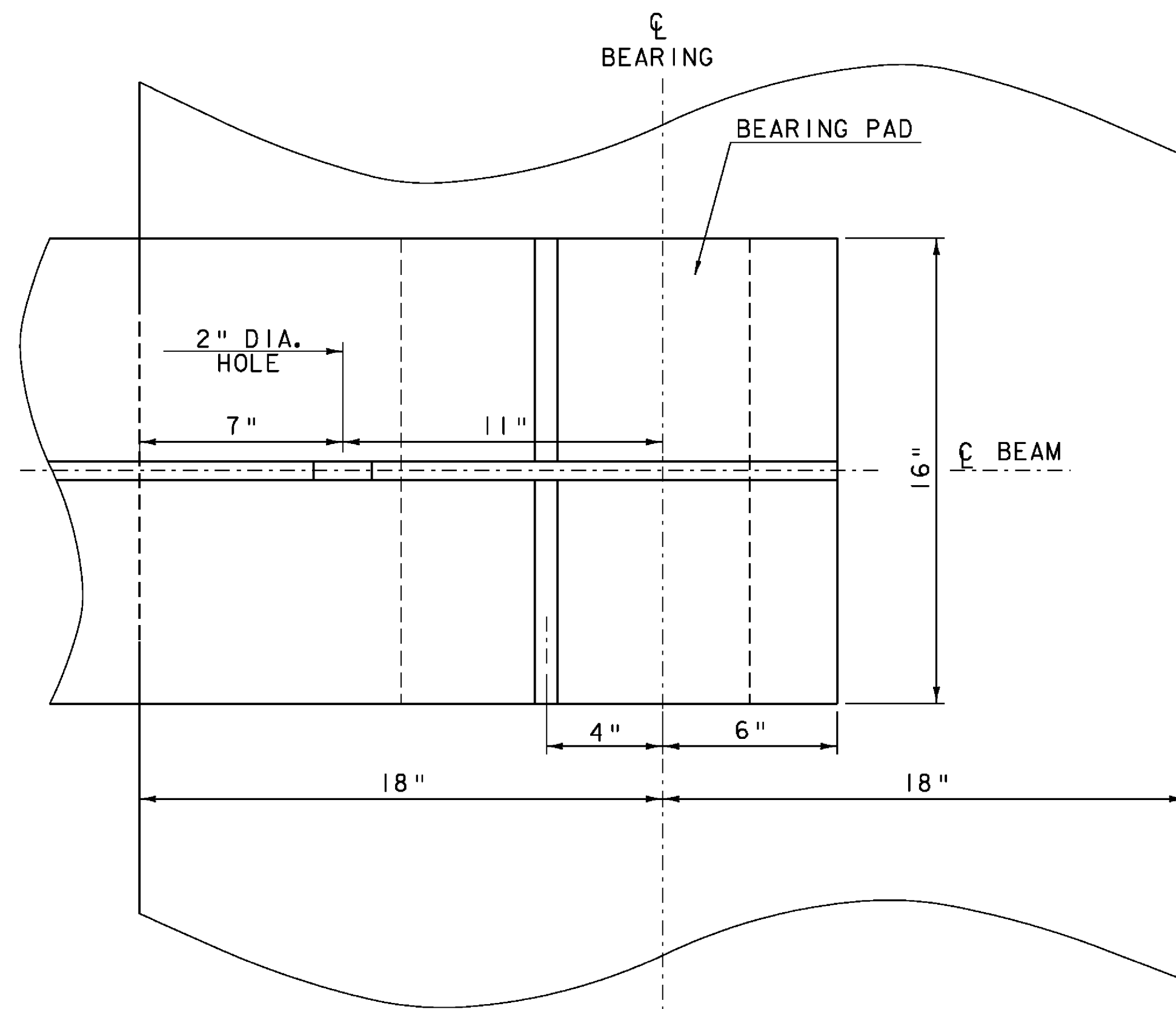
SCALE 1" = 1'-0"
1 9 6 3 0 2



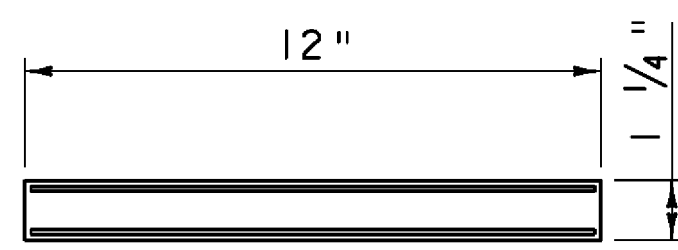
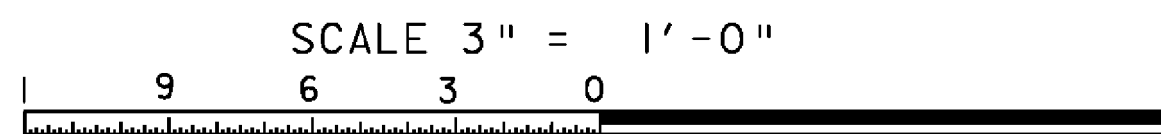
**INTERMEDIATE DIAPHRAGM
CONNECTION PLATE**

SCALE 1" = 1'-0"
1 9 6 3 0 2

| | |
|------------------------------|------------------------|
| PROJECT NAME: JAMACIA | PLOT DATE: 19-OCT-2009 |
| PROJECT NUMBER: BRO 1442(27) | DRAWN BY: K. PATTERSON |
| FILE NAME: s96j068det.dgn | CHECKED BY: J. LACROIX |
| PROJECT LEADER: K. HIGGINS | SHEET 20 OF 44 |
| DESIGNED BY: J. LACROIX | |
| DIAPHRAGM DETAILS | |

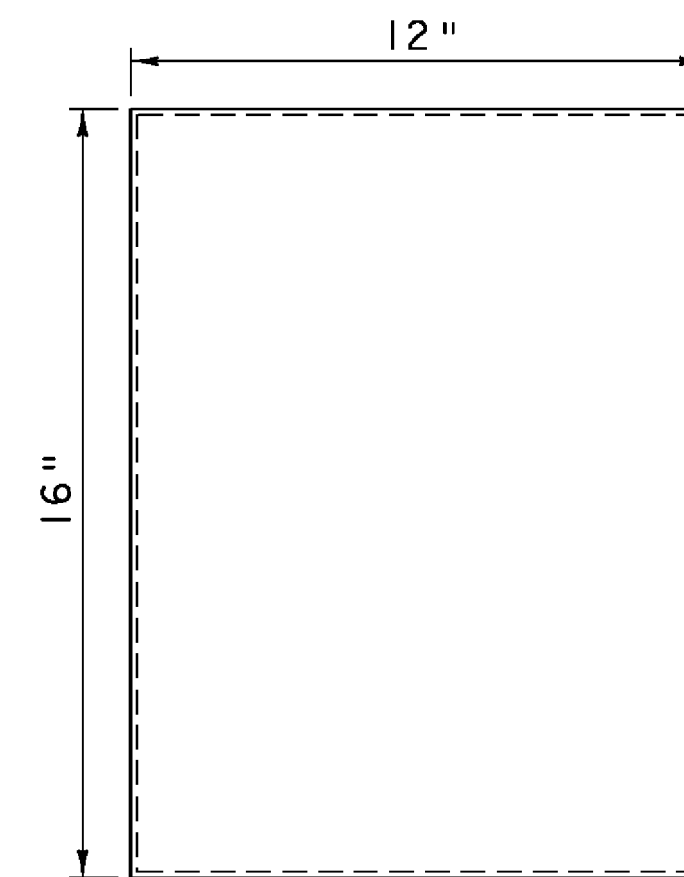


PLAN VIEW - END OF STEEL MEMBER AT ABUTMENT

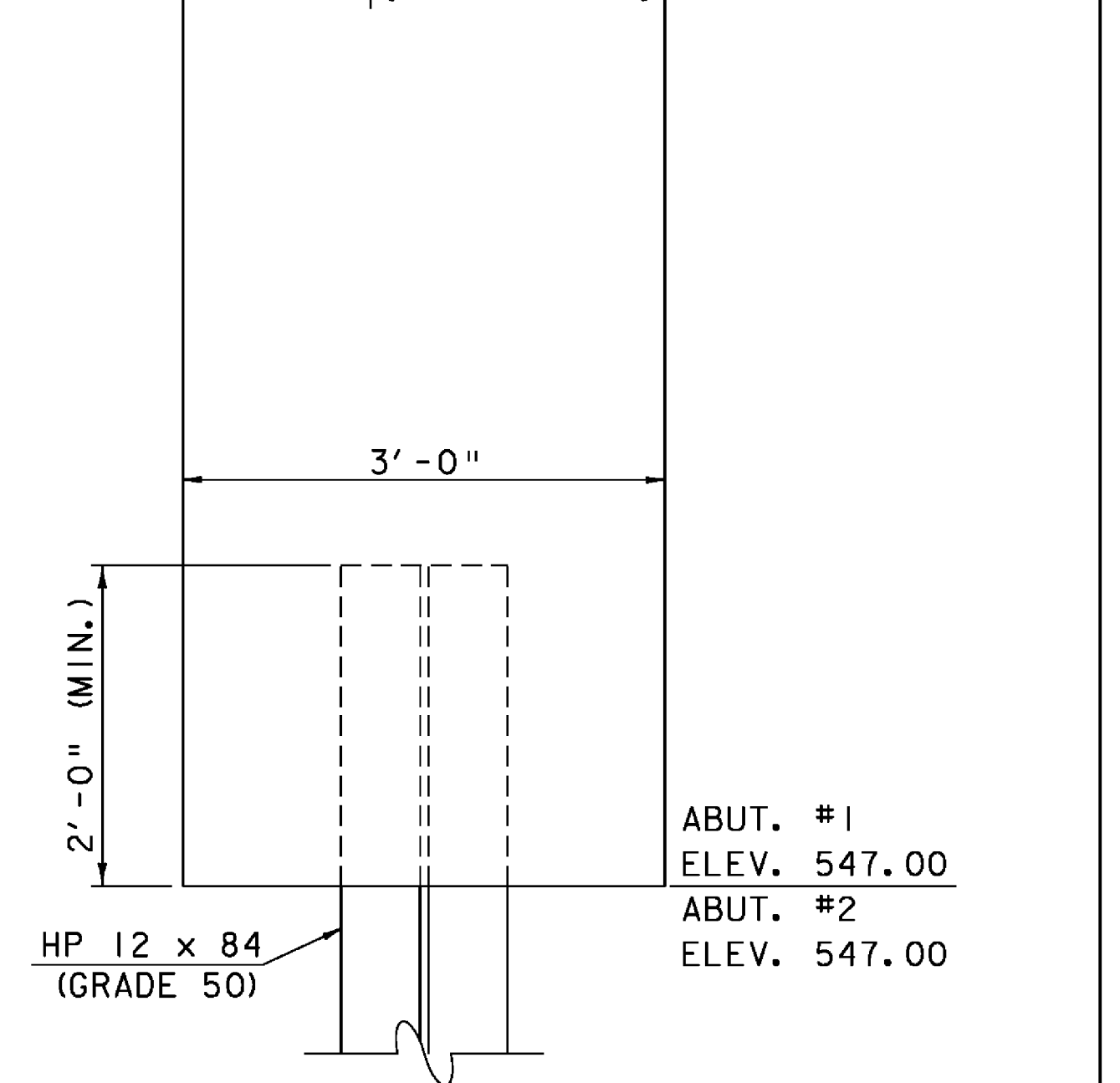
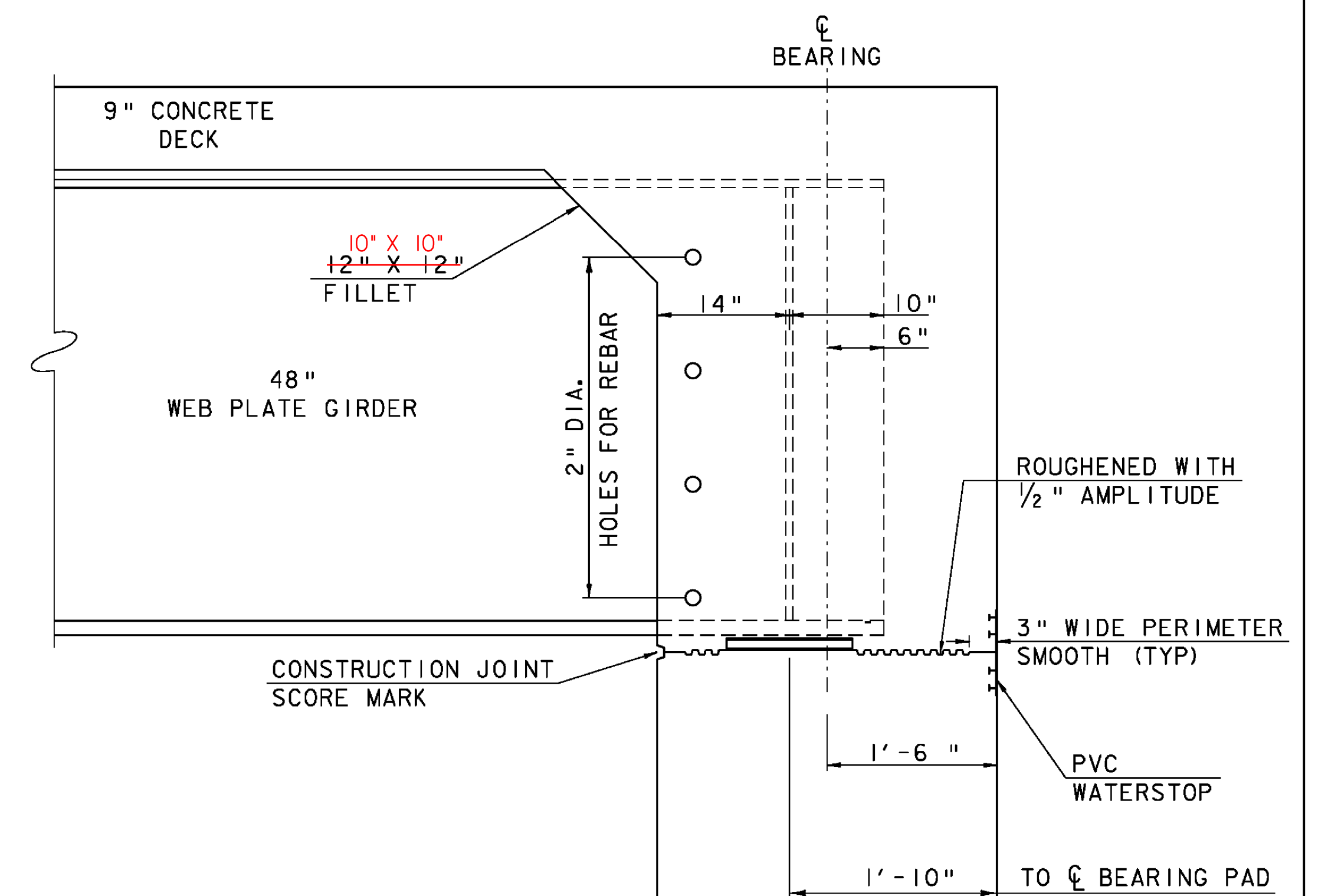
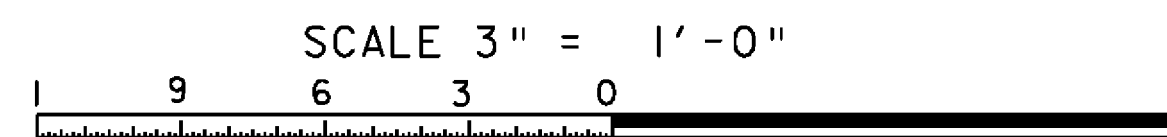


ELEVATION VIEW

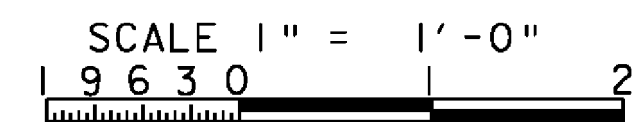
3 REINFORCING PLATES OF 14GA
2 ELASTOMER LAYERS OF 5/8" = 1 1/4"



PLAN VIEW STEEL REINFORCED ELASTOMER



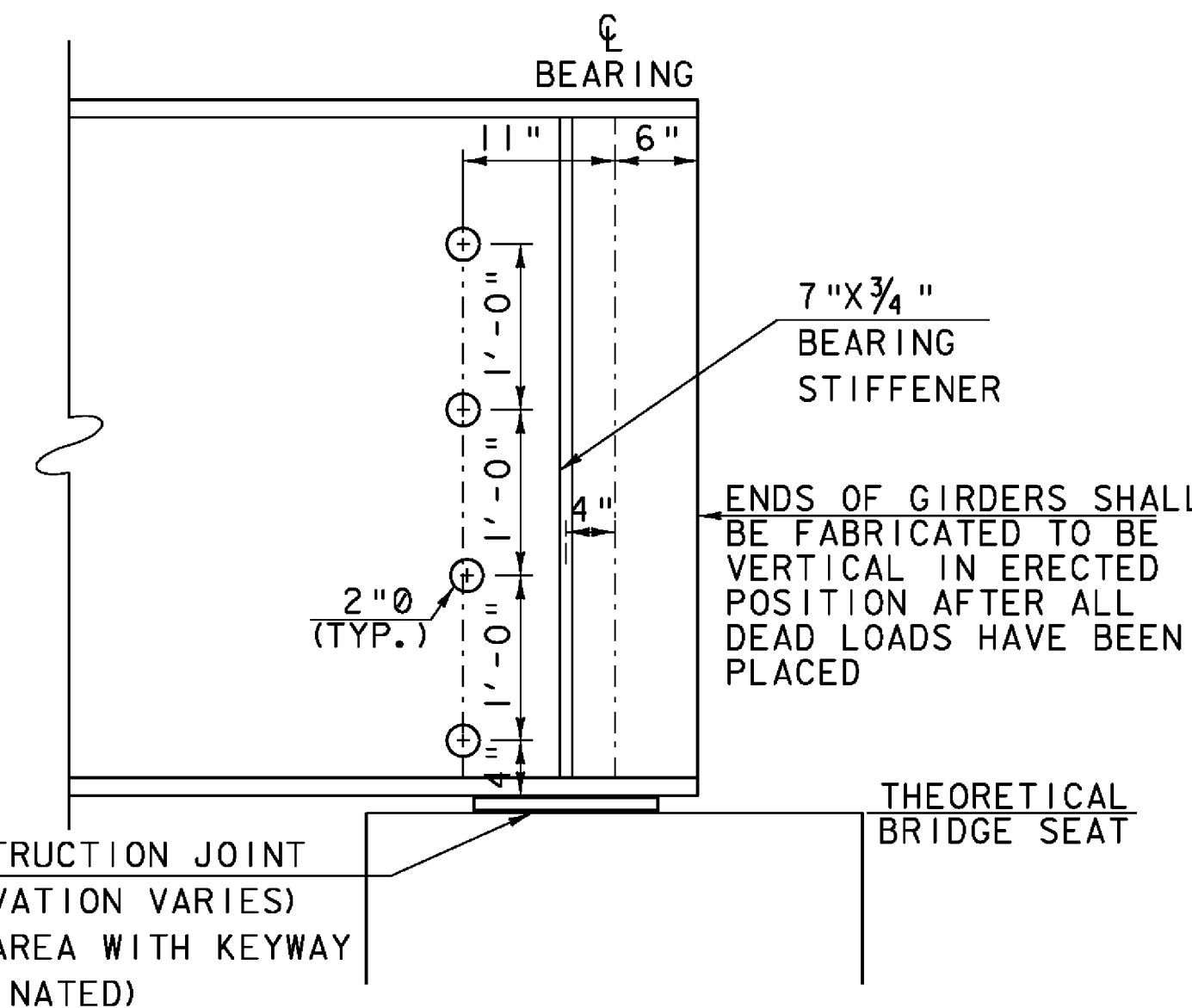
ELEVATION VIEW - END OF STEEL MEMBER AT ABUTMENT



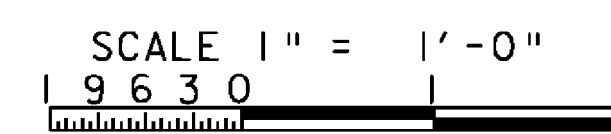
| THEORETICAL BRIDGE SEAT CHART | | |
|-------------------------------|-------------|-------------|
| | ABUTMENT #1 | ABUTMENT #2 |
| BEAM 1 | 554.40 | 554.20 |
| BEAM 2 | 554.60 | 554.40 |
| BEAM 3 | 554.40 | 554.20 |

NOTES:

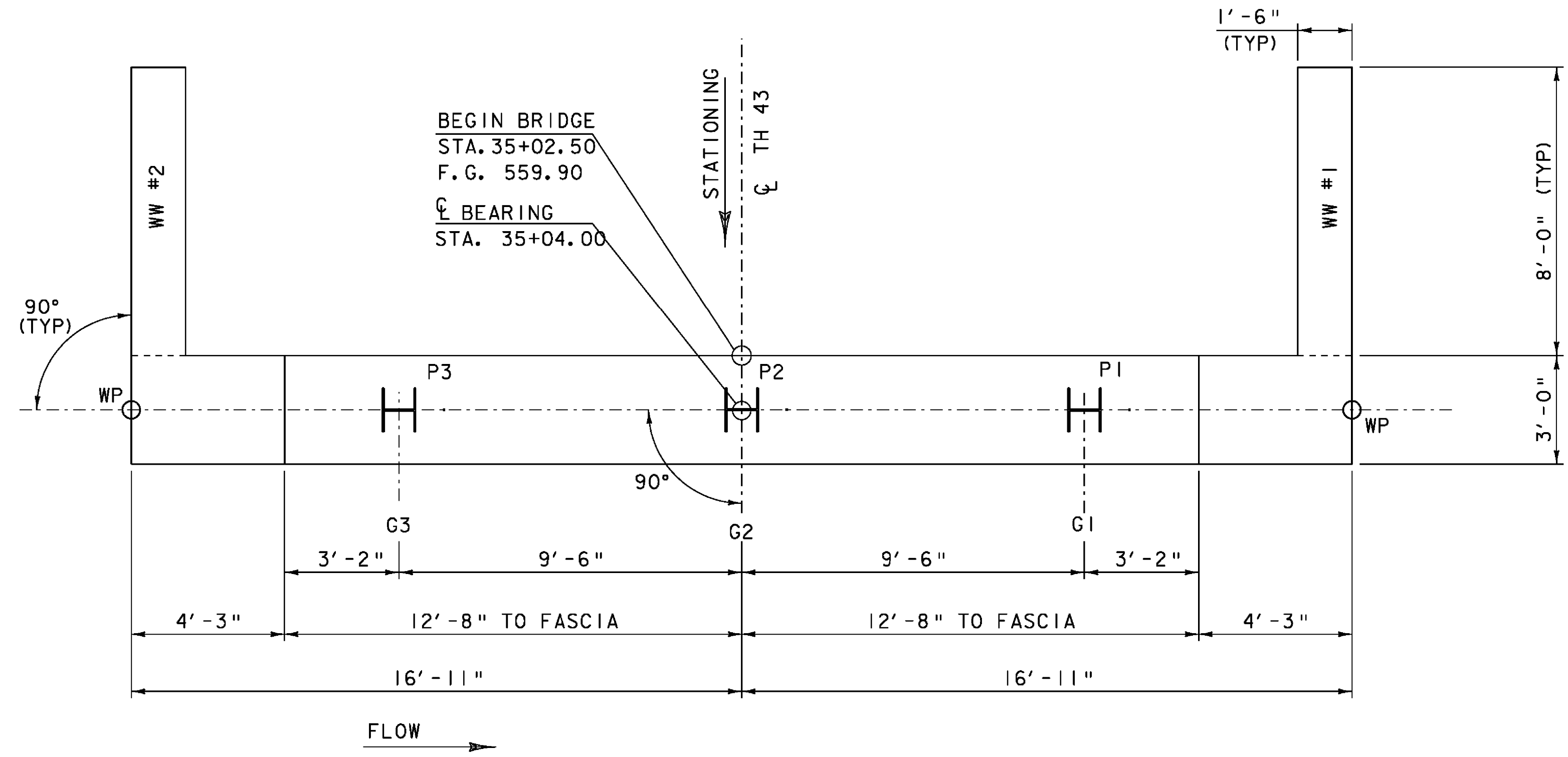
1. THE STEEL REINFORCED ELASTOMER SHALL BE PAID FOR UNDER ITEM 531.11 "BEARING DEVICE ASSEMBLY, ELASTOMERIC PAD" AND SHALL CONFORM TO SECTION 531.
2. ALL STEEL IN BEARING DEVICE ASSEMBLY SHALL BE AASHTO M270M/M270 GRADE 50 UNLESS OTHERWISE NOTED.
3. SUBSTITUTIONS FOR BEARING DEVICE ASSEMBLY COMPONENT MATERIALS AND SIZES SHALL BE DETAILED ON THE FABRICATION DRAWINGS. ALL SUBSTITUTIONS SHALL BE APPROVED BY THE STRUCTURES ENGINEER PRIOR TO FABRICATION AS PER SUBSECTIONS 506.04 AND 531.03 OF THE STANDARD SPECIFICATIONS.
4. ELASTOMER SHALL HAVE A NOMINAL HARDNESS OF 60 ON SHORE 'A' SCALE. ELASTOMER SHALL HAVE A SHEAR MODULUS BETWEEN 130 PSI AND 200 PSI. THE RAW ELASTOMER SHALL BE TEMPERATURE GRADE 3 AS DEFINED IN TABLE 18.4.5.1-1a OF AASHTO, DIVISION II, SECTION 18. NO FABRIC REINFORCEMENT WILL BE ALLOWED IN ELASTOMERIC PADS.
5. STEEL REINFORCED ELASTOMERIC BEARINGS SHALL HAVE A MINIMUM OF 1/8 INCH EDGE SEAL OF ELASTOMER INTEGRAL WITH BEARING OVER ALL INTERNAL PLATES.
6. THE CONCRETE SURFACE UNDER THE BEARING DEVICE SHALL BE LEVEL.



ELEVATION VIEW - END OF STEEL MEMBER AT ABUTMENT

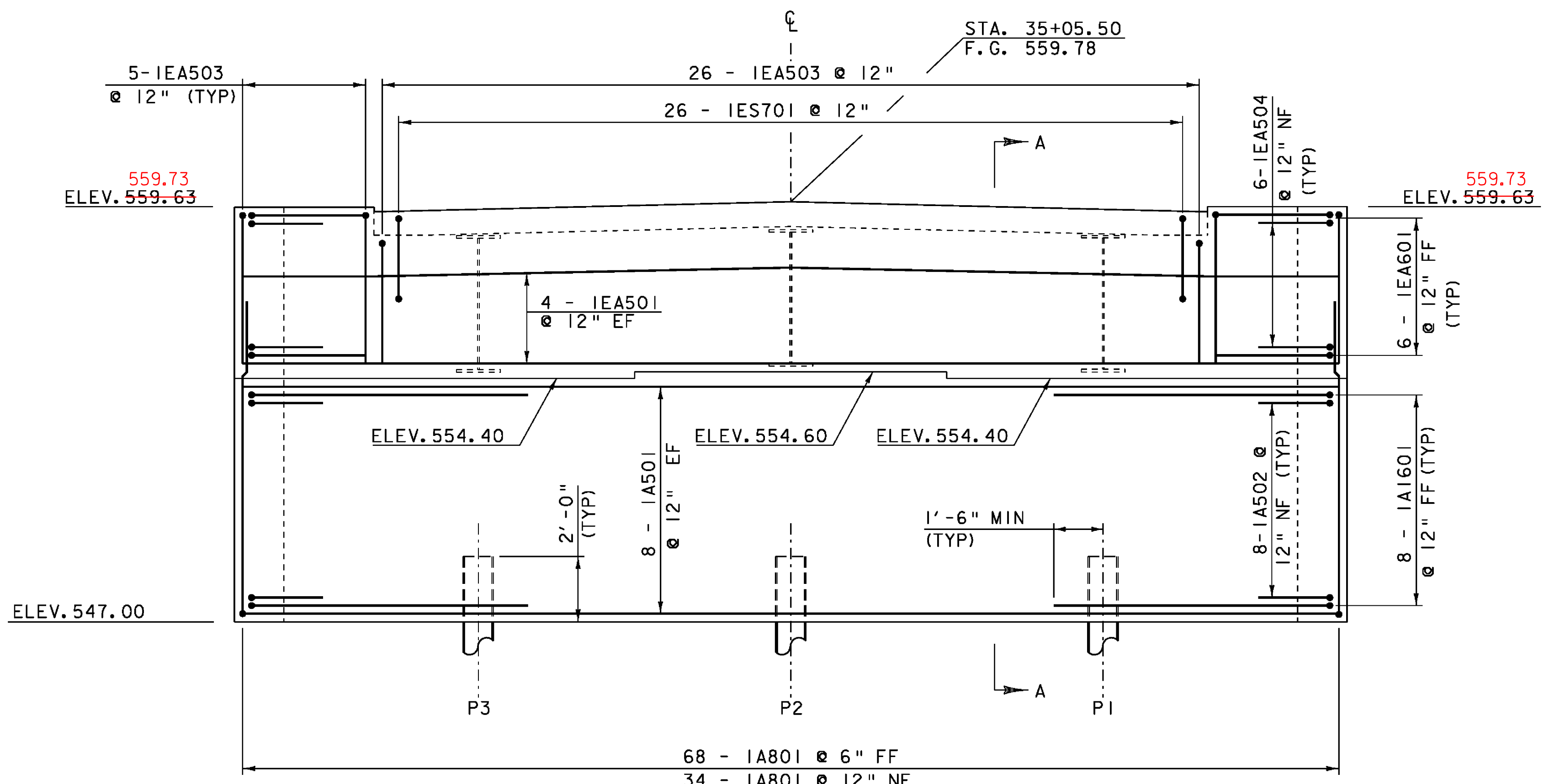


| | |
|------------------------------|------------------------|
| PROJECT NAME: JAMAICA | PLOT DATE: 19-OCT-2009 |
| PROJECT NUMBER: BRO 1442(27) | DRAWN BY: K. PATTERSON |
| FILE NAME: s96j068sub.dgn | CHECKED BY: J. LACROIX |
| PROJECT LEADER: K. HIGGINS | SHEET 21 OF 44 |
| DESIGNED BY: J. LACROIX | |
| BRIDGE END DETAILS | |



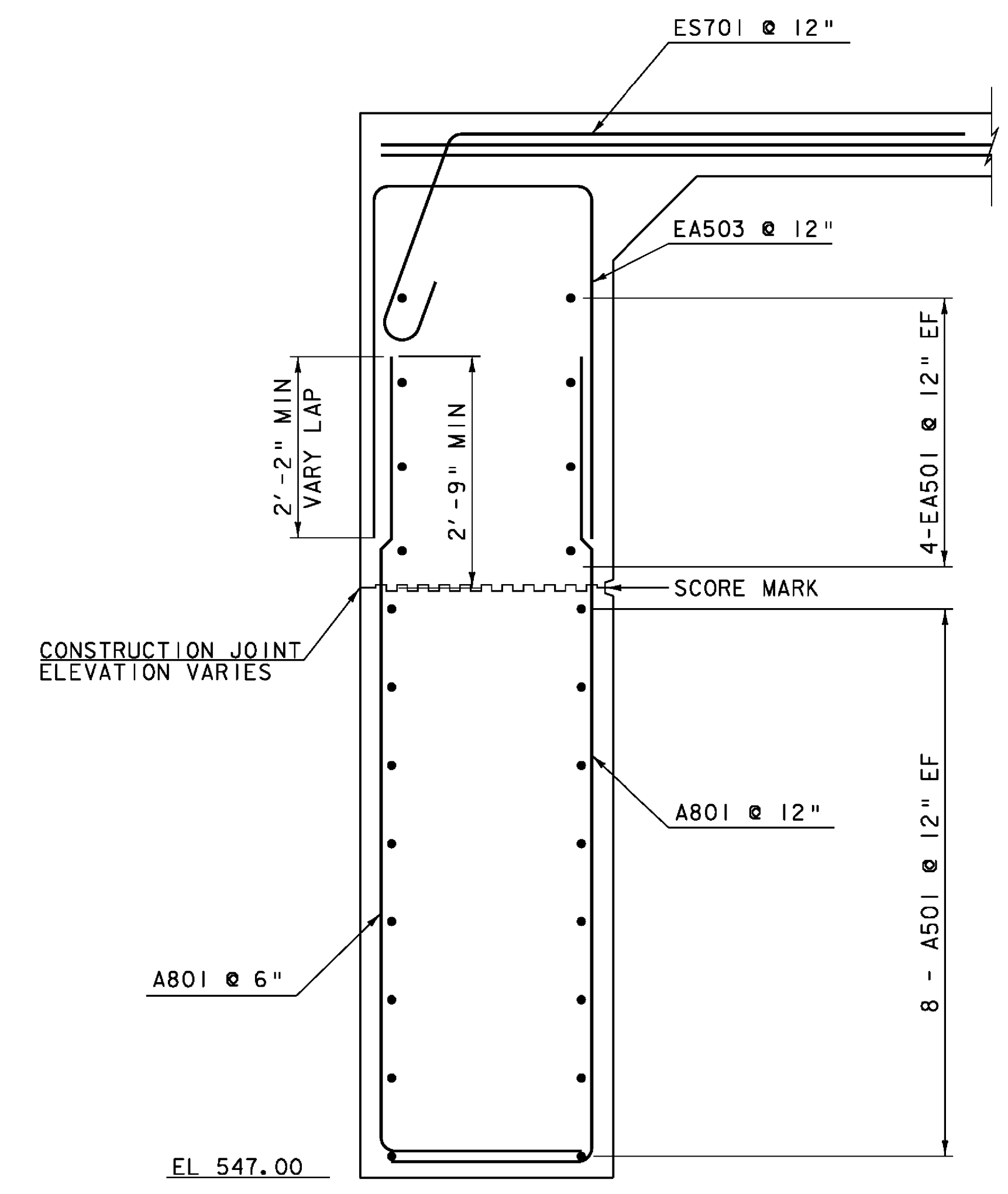
ABUTMENT #1 PLAN

SCALE $\frac{3}{8}$ " = 1'-0"
 0 1 2 3 4



ABUTMENT #1 ELEVATION

SCALE $\frac{3}{8}$ " = 1'-0"
 0 1 2 3 4



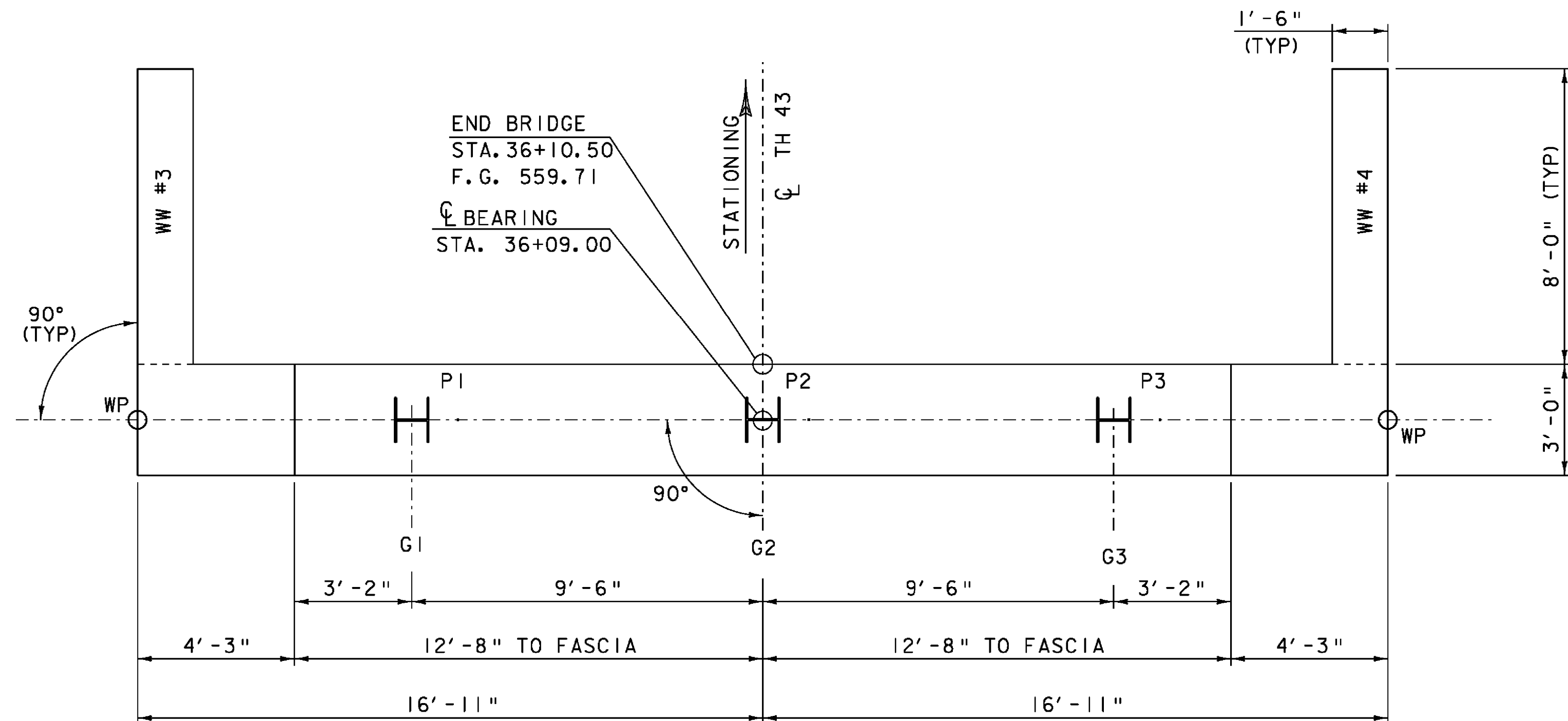
**SECTION A-A
 ABUTMENT TYPICAL**

SCALE $\frac{3}{4}$ " = 1'-0"
 0 1 2

NOTE:

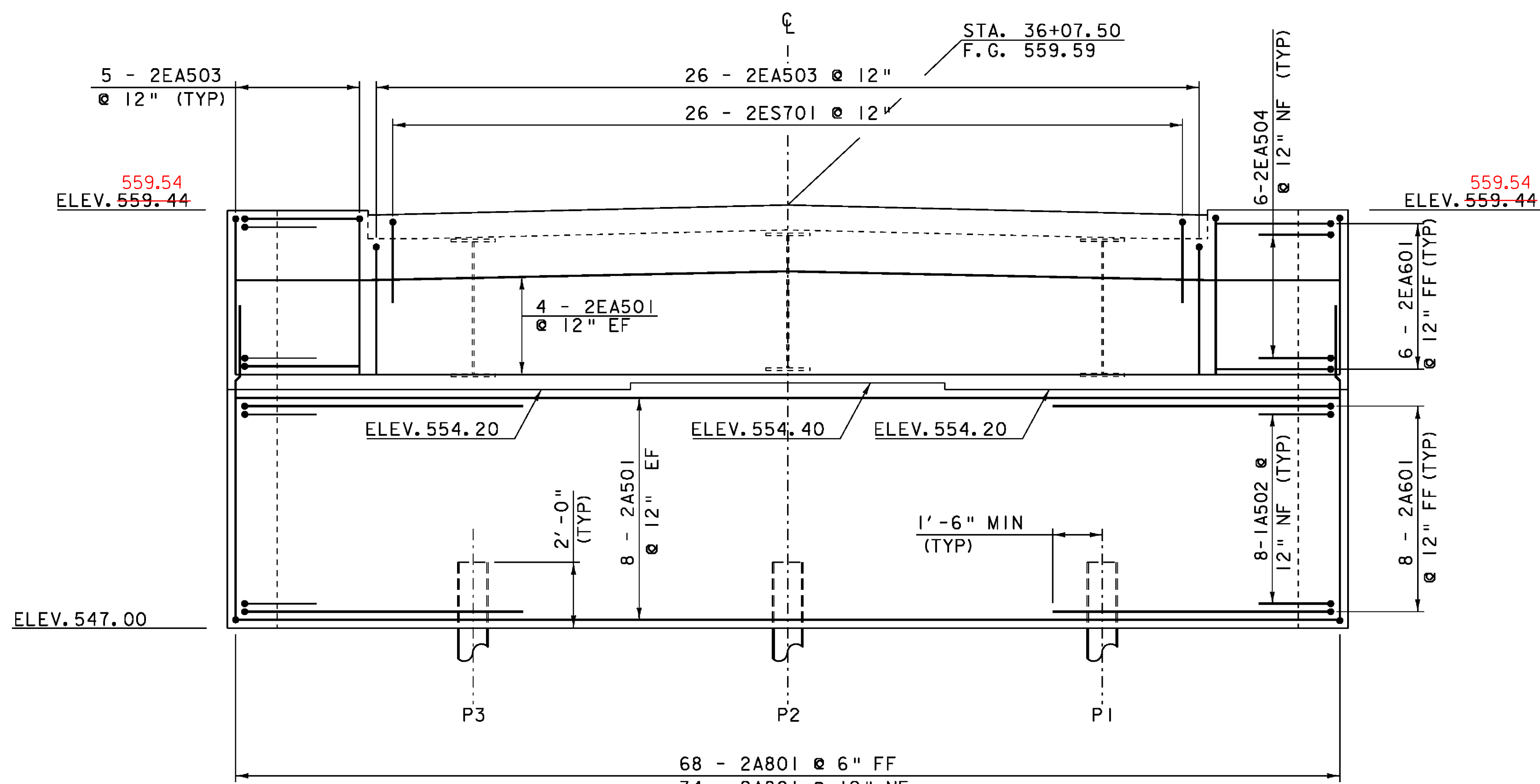
- NF = NEAR FACE
- FF = FAR FACE
- EF = EACH FACE
- ▲ = CUT TO FIT IN FIELD
- 3" CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.
- ALL LAPS 2'-2" UNLESS OTHERWISE NOTED.

| | |
|------------------------------|------------------------|
| PROJECT NAME: JAMAICA | PLOT DATE: 19-OCT-2009 |
| PROJECT NUMBER: BRO 1442(27) | DRAWN BY: R. PELLETT |
| FILE NAME: s96j068sub.dgn | CHECKED BY: J. LACROIX |
| PROJECT LEADER: K. HIGGINS | SHEET 22 OF 44 |
| DESIGNED BY: J. LACROIX | |
| ABUTMENT #1 | |



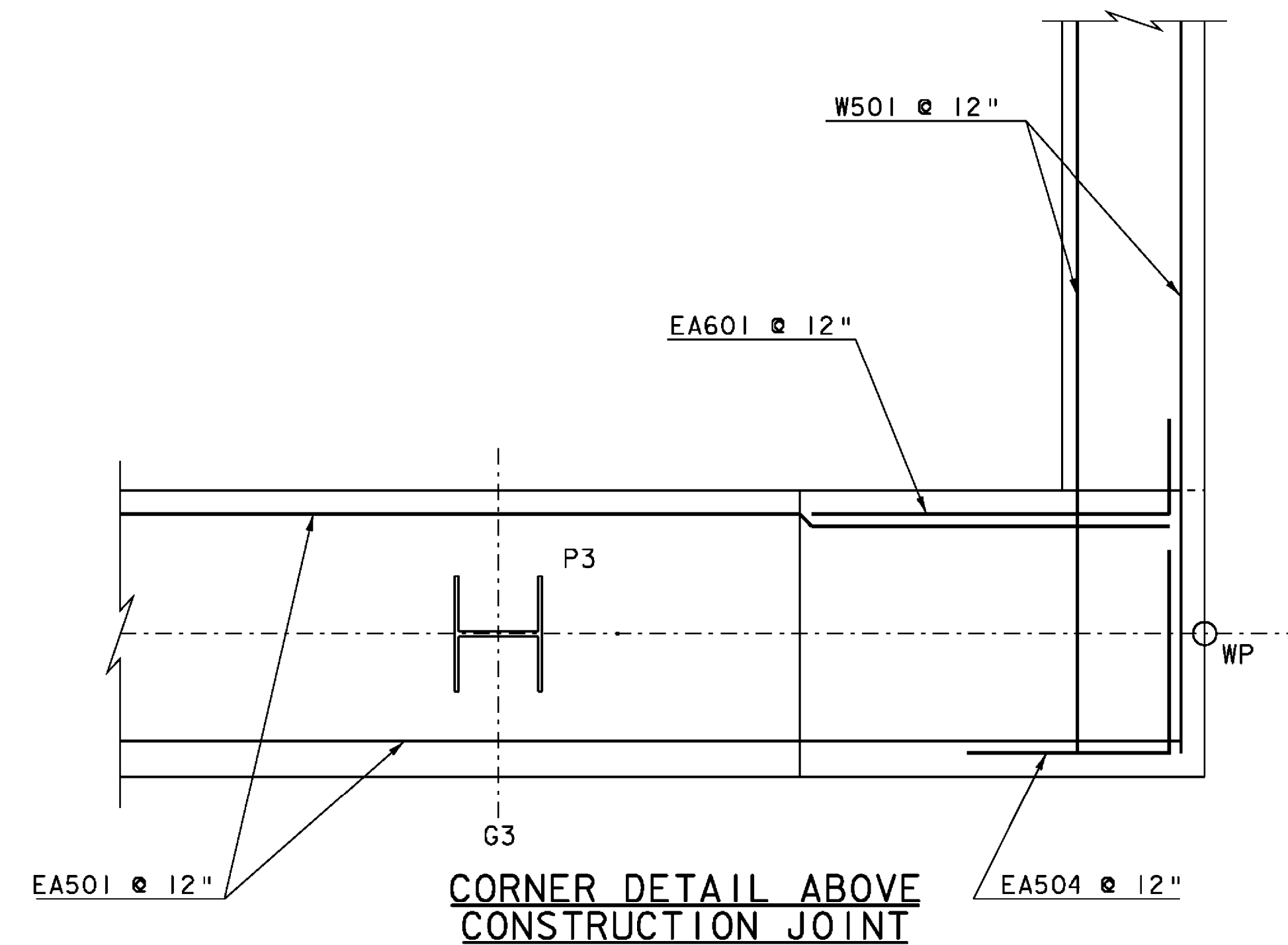
ABUTMENT #2 PLAN

SCALE $\frac{3}{8}$ " = 1'-0"
 0 1 2 3 4



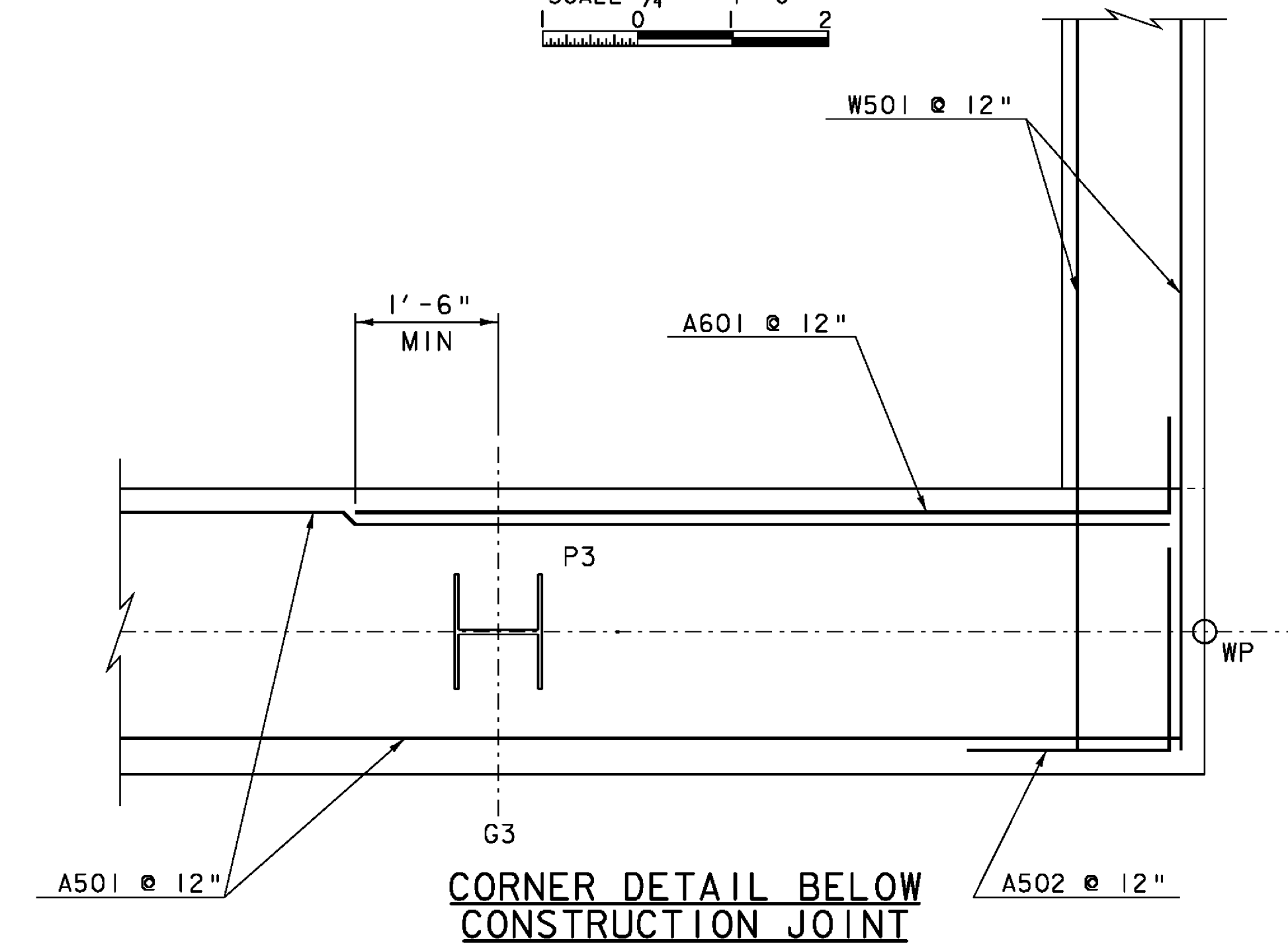
ABUTMENT #2 ELEVATION

SCALE $\frac{3}{8}$ " = 1'-0"
 0 1 2 3 4



CORNER DETAIL ABOVE CONSTRUCTION JOINT

SCALE $\frac{3}{4}$ " = 1'-0"
 0 1 2



CORNER DETAIL BELOW CONSTRUCTION JOINT

SCALE $\frac{3}{4}$ " = 1'-0"
 0 1 2

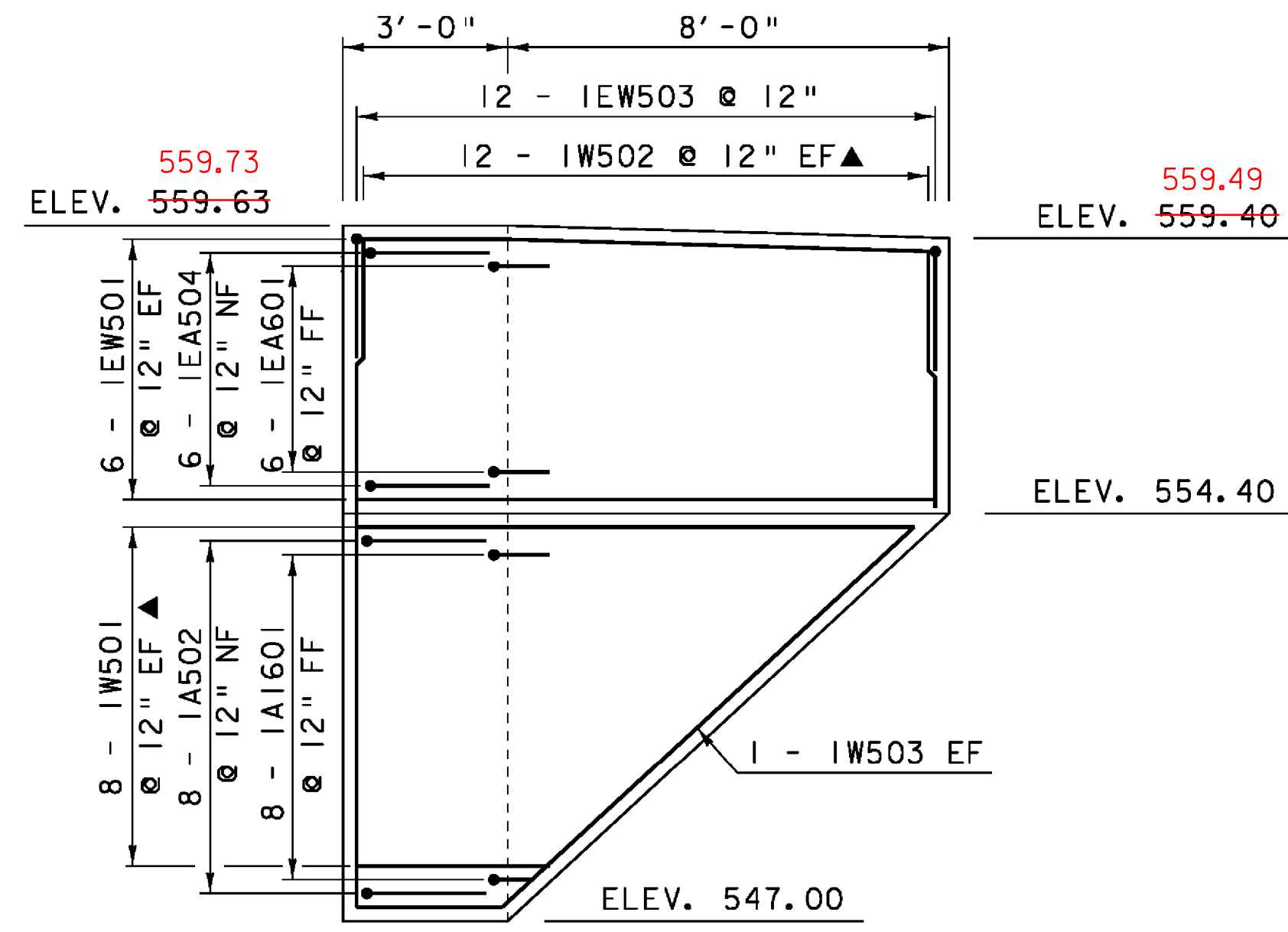
NOTE:

- NF = NEAR FACE
- FF = FAR FACE
- EF = EACH FACE
- ▲ = CUT TO FIT IN FIELD
- 3" CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.
- ALL LAPS 2'-2" UNLESS OTHERWISE NOTED.

PROJECT NAME: JAMAICA
 PROJECT NUMBER: BRO 1442(27)

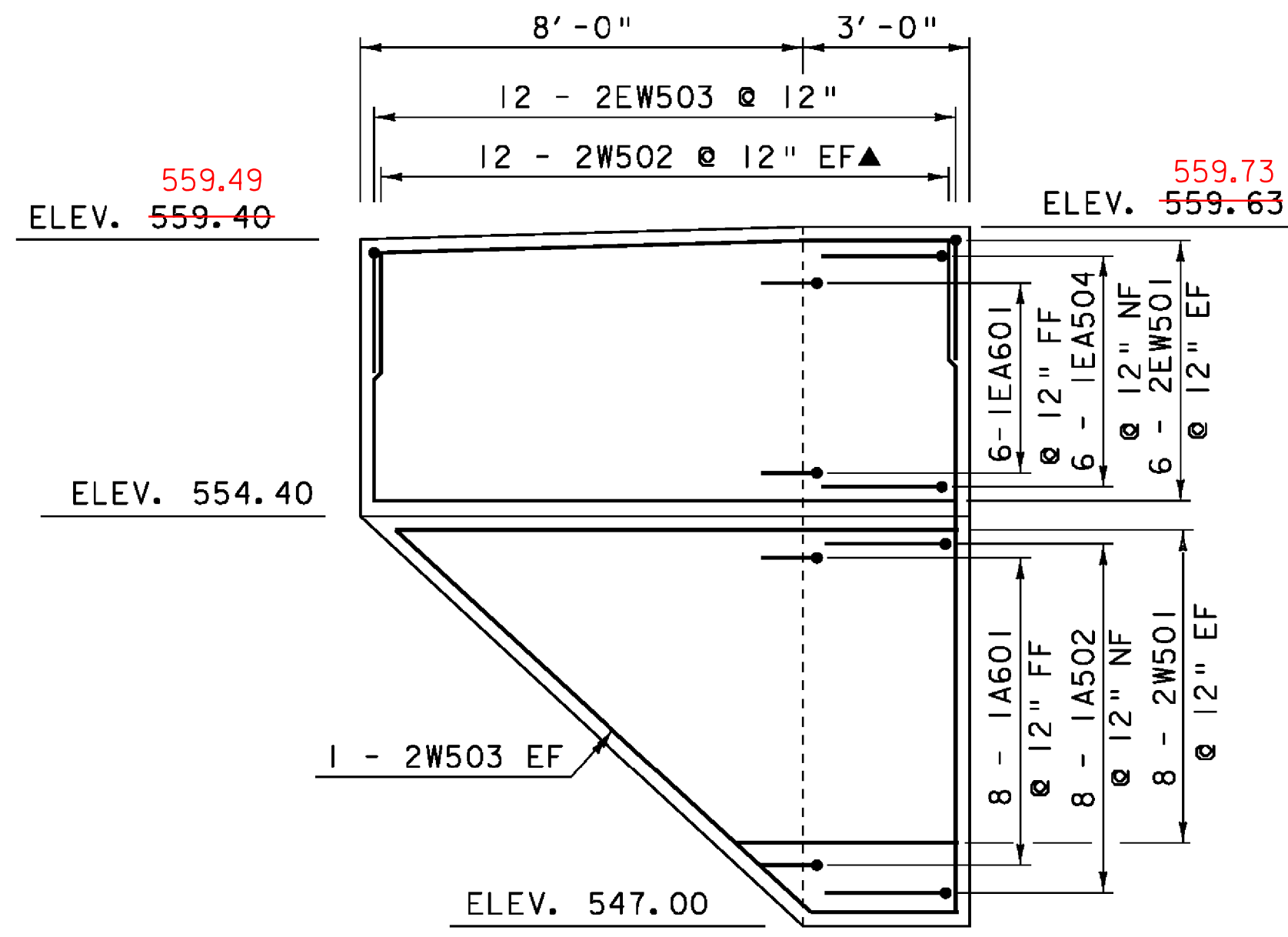
FILE NAME: s96j068sub.dgn
 PROJECT LEADER: K. HIGGINS
 DESIGNED BY: J. LACROIX
 ABUTMENT #2

PLOT DATE: 19-OCT-2009
 DRAWN BY: R. PELLETT
 CHECKED BY: J. LACROIX
 SHEET 23 OF 44



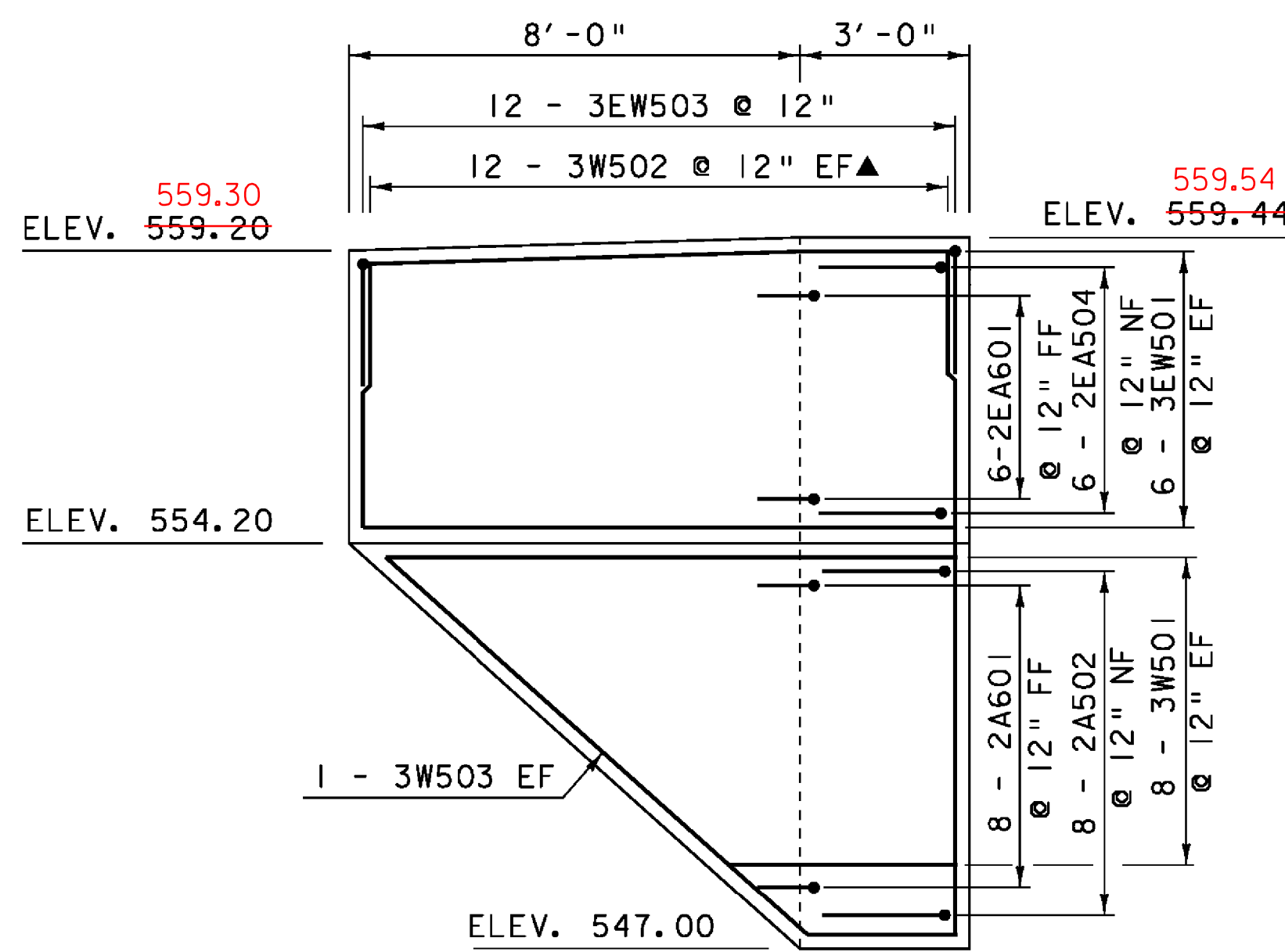
WINGWALL #1 ELEVATION

SCALE 3/8" = 1'-0"
0 1 2 3 4



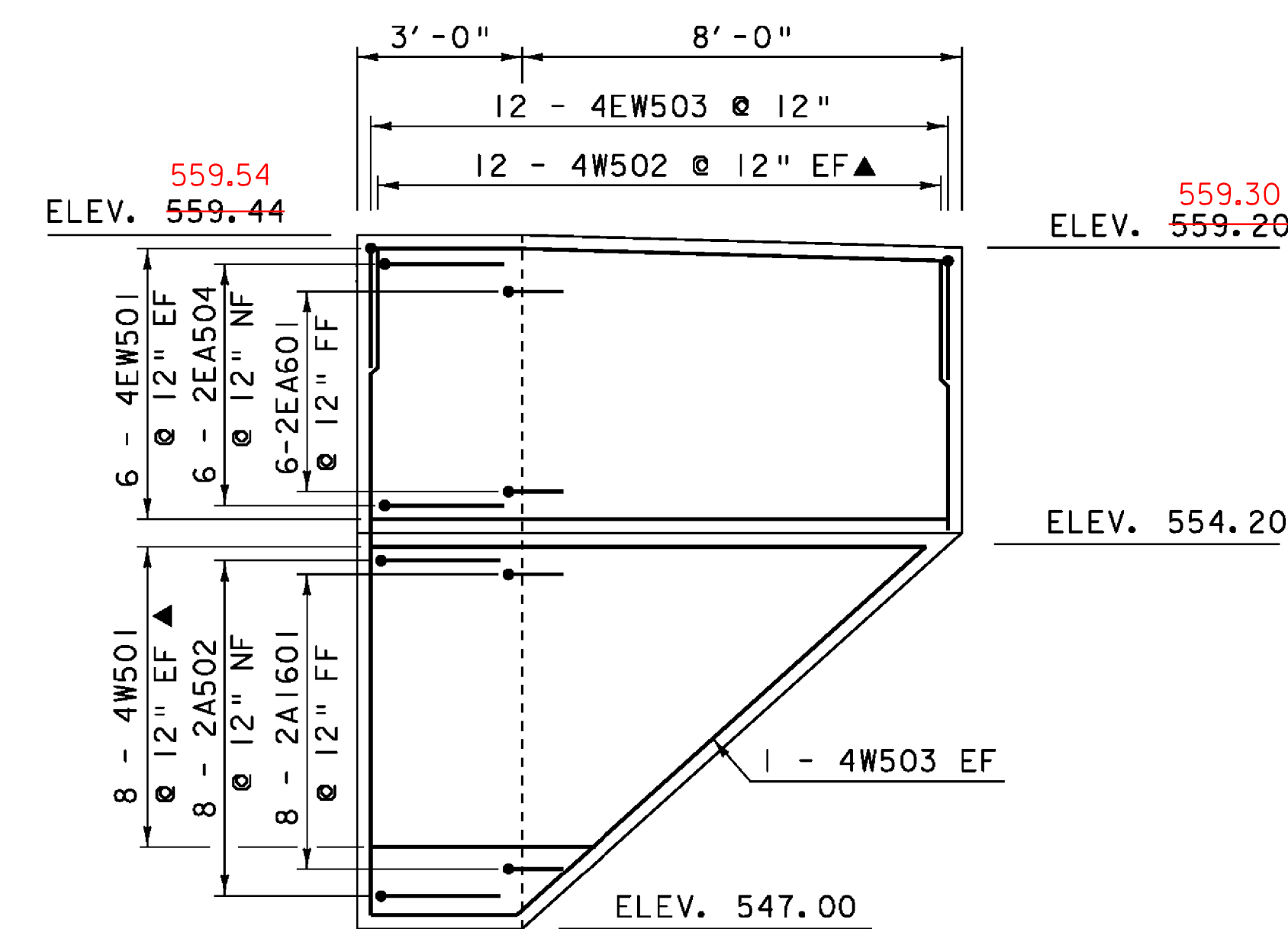
WINGWALL #2 ELEVATION

SCALE 3/8" = 1'-0"
0 1 2 3 4



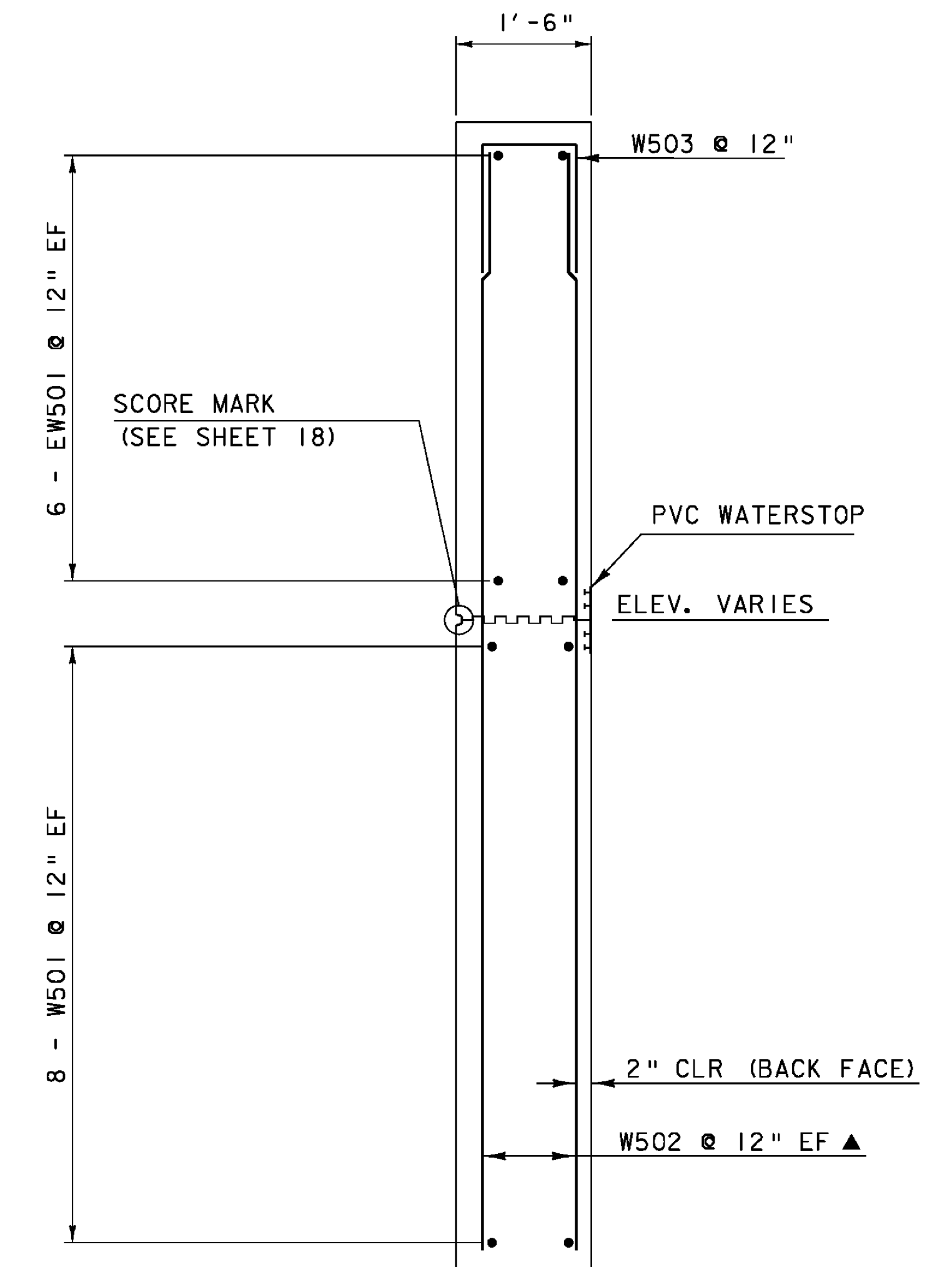
WINGWALL #3 ELEVATION

SCALE 3/8" = 1'-0"
0 1 2 3 4



WINGWALL #4 ELEVATION

SCALE 3/8" = 1'-0"
0 1 2 3 4



WINGWALL TYPICAL

SCALE 3/4" = 1'-0"
0 1 2

NOTE:

- NF = NEAR FACE
- FF = FAR FACE
- EF = EACH FACE
- ▲ = CUT TO FIT IN FIELD
- 3" CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.
- ALL LAPS 2'-2" UNLESS OTHERWISE NOTED.

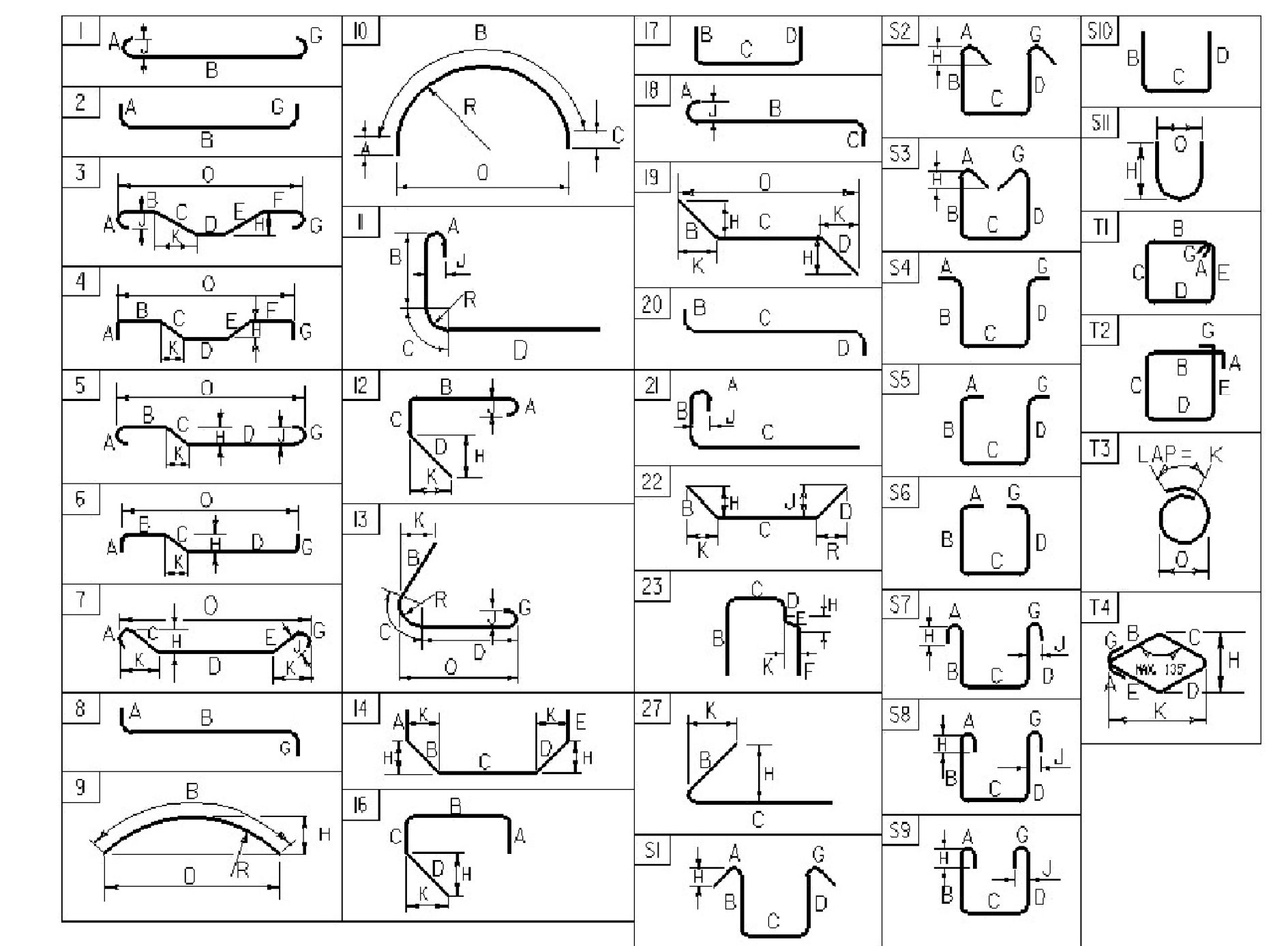
| | | | | | |
|-----------------|--------------|-----------------|----------------|-------------|----------------|
| PROJECT NAME: | JAMAICA | FILE NAME: | s96j068sub.dgn | PLOT DATE: | 19-OCT-2009 |
| PROJECT NUMBER: | BRO 1442(27) | PROJECT LEADER: | K. HIGGINS | DRAWN BY: | R. PELLETT |
| | | DESIGNED BY: | J. LACROIX | CHECKED BY: | J. LACROIX |
| | | WINGWALLS #1-#4 | | | SHEET 24 OF 44 |

REINFORCING STEEL SCHEDULE

| ITEM | EACH | SIZE | LENGTH | MARK | TYPE | A | B | C | D | E | F | G | H | J | K | R | O | ITEM | EACH | SIZE | LENGTH | MARK | TYPE | A | B | C | D | E | F | G | H | J | K | R | O | | | |
|--------------------|------|------|----------|--------|------|----------|---------|--------|---------|---|---|---|---------|--------|---------|---|---|------|------|------|--------|------|------|---|---|---|---|---|---|---|---|---|---|---|---|--|--|--|
| DECK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| * | 409 | 5 | 24'- 10" | ES501 | STR | 24'- 10" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 156 | 5 | 37'- 4" | ES502 | STR | 37'- 4" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 24 | 5 | 33'- 4" | ES503 | STR | 33'- 4" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| △ | 54 | 7 | 10'- 10" | ES701 | 12 | 0'- 7" | 2'- 3" | --- | 8'- 0" | | | | 5'- 8" | 0'- 5" | 2'- 1" | | | | | | | | | | | | | | | | | | | | | | | |
| ABUTMENT #1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| * | 9 | 5 | 33'- 4" | 1EA501 | STR | 33'- 4" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ▲ | 36 | 5 | 12'- 1" | 1EA503 | S10 | | 4'- 9" | 2'- 7" | 4'- 9" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 12 | 6 | 4'- 9" | 1EA601 | S10 | | 3'- 9" | 1'- 0" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 12 | 5 | 4'- 4" | 1EA701 | S10 | | 2'- 2" | 2'- 2" | --- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 6 | 5 | 6'- 0" | 1EA504 | 17 | | 3'- 0" | 3'- 0" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| * | 17 | 5 | 33'- 4" | 1A501 | STR | 33'- 4" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 16 | 5 | 4'- 4" | 1A502 | S10 | | 2'- 2" | 2'- 2" | --- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| △ | 18 | 6 | 9'- 8" | 1A601 | S10 | | 8'- 8" | 1'- 0" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| △ | 104 | 8 | 13'- 6" | 1A801 | 17 | | 11'- 0" | 2'- 6" | --- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| WINGWALL #1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 12 | 5 | 10'- 6" | 1EW501 | STR | 10'- 6" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ▲ | 24 | 5 | 12'- 1" | 1W502 | STR | 12'- 1" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 12 | 5 | 5'- 5" | 1W503 | S10 | | 2'- 2" | 1'- 1" | 2'- 2" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ▲ | 16 | 5 | 10'- 1" | 1W501 | STR | 10'- 1" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | 5 | 12'- 10" | 1W503 | 22 | | 10'- 2" | 2'- 8" | | | | | 1'- 10" | | 1'- 11" | | | | | | | | | | | | | | | | | | | | | | | |
| WINGWALL #2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 12 | 5 | 10'- 6" | 2EW501 | STR | 10'- 6" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ▲ | 24 | 5 | 12'- 1" | 2W502 | STR | 12'- 1" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 12 | 5 | 5'- 5" | 2EW503 | S10 | | 2'- 2" | 1'- 1" | 2'- 2" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ▲ | 16 | 5 | 10'- 1" | 2W501 | STR | 10'- 1" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | 5 | 12'- 10" | 2W503 | 22 | | 10'- 2" | 2'- 8" | | | | | 1'- 10" | | 1'- 11" | | | | | | | | | | | | | | | | | | | | | | | |
| ABUTMENT #2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| * | 9 | 5 | 33'- 4" | 2EA501 | STR | 33'- 4" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ▲ | 36 | 5 | 12'- 5" | 2EA503 | S10 | | 4'- 11" | 2'- 7" | 4'- 11" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 12 | 6 | 4'- 9" | 2EA601 | S10 | | 3'- 9" | 1'- 0" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 12 | 5 | 4'- 4" | 2EA701 | S10 | | 2'- 2" | 2'- 2" | --- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 6 | 5 | 6'- 0" | 2EA504 | 17 | | 3'- 0" | 3'- 0" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| * | 17 | 5 | 33'- 4" | 2A501 | STR | 33'- 4" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 16 | 5 | 4'- 4" | 2A502 | S10 | | 2'- 2" | 2'- 2" | --- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| △ | 18 | 6 | 9'- 8" | 2A601 | S10 | | 8'- 8" | 1'- 0" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| △ | 104 | 8 | 13'- 6" | 2A801 | 17 | | 11'- 0" | 2'- 6" | --- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| WINGWALL #3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 12 | 5 | 10'- 6" | 3EW501 | STR | 10'- 6" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ▲ | 24 | 5 | 12'- 1" | 3W502 | STR | 12'- 1" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 12 | 5 | 5'- 5" | 3EW503 | S10 | | 2'- 2" | 1'- 1" | 2'- 2" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ▲ | 16 | 5 | 10'- 1" | 3W501 | STR | 10'- 1" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | 5 | 12'- 9" | 3W503 | 22 | | 10'- 1" | 2'- 8" | | | | | 1'- 9" | | 2'- 0" | | | | | | | | | | | | | | | | | | | | | | | |
| WINGWALL #4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 12 | 5 | 10'- 6" | 4EW501 | STR | 10'- 6" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ▲ | 24 | 5 | 12'- 1" | 4W502 | STR | 12'- 1" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 12 | 5 | 5'- 5" | 4EW503 | S10 | | 2'- 2" | 1'- 1" | 2'- 2" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ▲ | 16 | 5 | 10'- 1" | 4W501 | STR | 10'- 1" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | 5 | 12'- 8" | 4W503 | 22 | | 10'- 0" | 2'- 8" | | | | | 1'- 9" | | 2'- 0" | | | | | | | | | | | | | | | | | | | | | | | |

~ NOTES ~

- UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING NO. 18 SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31 (ASTM A 615-S1). ALL BARS SHALL BE GRADE 60, UNLESS OTHERWISE DESIGNATED.
- FOR TYPICAL BENDING DETAILS, RECOMMENDED PIN DIAMETER "D" OF BENDS AND HOOKS, AND OTHER STANDARD PRACTICE, SEE CURRENT CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE".
- BARS WHICH REQUIRE MORE ACCURATE BENDING THAN STANDARD PRACTICES SHOULD HAVE LIMITS INDICATED.
- ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180 DEGREE AND 135 DEGREE HOOKS.
- "J" DIMENSION ON 180 DEGREE HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE, STANDARD HOOKS ARE TO BE USED.
- "H" DIMENSION ON STIRRUPS TO BE SHOWN ONLY WHEN NECESSARY TO MAINTAIN CLEARANCES.
- WHERE SLOPE DIFFERS FROM 45 DEGREES, DIMENSIONS "H" AND "K" MUST BE SHOWN.
- ▲ DENOTES BARS TO BE CUT IN FIELD.
- * DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.
- △ DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES.
- E IN BAR MARK PREFIX DENOTES EPOXY COATED REINFORCING STEEL.



| ASTM STANDARD REINFORCING BARS | | | | |
|--------------------------------|------------------------|-------------------------|--------------------------|------------------|
| BAR SIZE DESIGNATION | WEIGHT POUNDS PER FOOT | NOMINAL DIAMETER INCHES | AREA INCHES ² | PERIMETER INCHES |
| #3 | 0.376 | 0.375 | 0.11 | 1.178 |
| #4 | 0.668 | 0.500 | 0.20 | 1.571 |
| #5 | 1.043 | 0.625 | 0.31 | 1.963 |
| #6 | 1.502 | 0.750 | 0.44 | 2.356 |
| #7 | 2.044 | 0.875 | 0.60 | 2.749 |
| #8 | 2.670 | 1.000 | 0.79 | 3.142 |
| #9 | 3.400 | 1.128 | 1.00 | 3.544 |
| #10 | 4.303 | 1.270 | 1.27 | 3.990 |
| #11 | 5.313 | 1.410 | 1.56 | 4.430 |
| #14 | 7.65 | 1.693 | 2.25 | 5.32 |
| #18 | 13.60 | 2.257 | 4.00 | 7.09 |

PROJECT NAME: JAMAICA
 PROJECT NUMBER: BRO 1442(27)
 FILE NAME: s96j068sub.dgn
 PROJECT MANAGER: K.HIGGINS
 DESIGNED BY: J.LACROIX
 PLOT DATE: 10/16/2009
 DRAWN BY: K.PATTERSON
 CHECKED BY: J.LACROIX
 REINFORCING STEEL SCHEDULE SHEET 25 OF 44

1.1 PROJECT DISCRPTION

LOCATED ON TOWN HIGHWAY #43, KNOWN AS EATON ROAD, 0.1 MILES SOUTH OF THE INTERSECTION OF TOWN HIGHWAY #43 AND VERMONT ROUTE 100. THE PROJECT CONTINUES SOUTHERLY FOR A DISTANCE OF 275 FEET ALONG TOWN HIGHWAY #43.

WORK TO BE PERFORMED UNDER THIS CONTRACT INCLUDES THE REPLACEMENT OF THE EXISTING STEEL TRUSS BRIDGE WITH NECESSARY BRIDGE, ROADWAY AND CHANNEL WORK, REMOVAL OF A TEMPORARY BRIDGE, ABUTMENTS, APPROACHES AND ASSOCIATED CHANNEL RESTORATION WILL ALSO BE PERFORMED UNDER THIS PROJECT.

IT IS ANTICIPATED THAT THIS PROJECT WILL LAST ONE CONSTRUCTION SEASON.

TOTAL DISTURBED AREA (INCLUDING WASTE, BORROW AND STAGING AREAS): 0.62 ACRES.

1.2 SITE INVENTORY

1.2.1 OFF SITE DRAINAGE CHARACTERISTICS (UP AND DOWN GRADIENT):

THE PROPERTY SURROUNDING THE PROJECT SITE CONSISTS OF WELL ESTABLISHED VEGETATION, WITH MODERATE SLOPES OF VARIOUS GRASSES, SHRUBS AND TREES. THE DRAINAGE WAYS ARE WELL DEFINED AND RUNOFF WATER ENTERING THE PROJECT SITE WILL BE PRIMARILY LIMITED TO THAT WHICH IS CONVEYED ALONG ROADWAY DITCHES, AND CULVERTS.

1.2.2 DRAINAGE, WATERWAYS, BODIES OF WATER PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES:

THE WARDSBORO BROOK AND WEST RIVER ARE LOCATED IN THE PROJECT AREA. THERE ARE NO OTHER BODIES OF WATER WITHIN THE PROJECT AREA.

THERE ARE EXISTING CULVERTS NEAR EACH END OF THE PROJECT AREA BUT THEY WILL NOT BE AFFECTED BY THIS PROJECT.

DISTURBANCE OF SOILS NEAR NATURAL OR MAN-MADE WATERWAYS CONSISTS OF THAT WHICH IS NECESSARY TO REMOVE THE ABUTMENTS OF THE EXISTING TRUSS BRIDGE AS WELL AS THE EXISTING TEMPORARY BRIDGE. STABILIZATION OF DISTURBANCE TO STREAM BANKS WILL BE ACCOMPLISHED WITH STONE FILL, TYPE III.

1.2.3 TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES:

THE TOPOGRAPHY OF THE PROJECT SITE IS SLIGHT TO MODERATE, WITH A MIXTURE OF FORESTED AND OPEN AREAS.

THERE ARE NO RESIDENCES OR BUSINESSES FOUND WITHIN THE PROJECT.

THERE ARE NO OVERHEAD UTILITY SERVICES ALONG TOWN HIGHWAY #43.

THE PROJECT IMPACTS STEEP SLOPES. THE SLOPES ARE EITHER WELL VEGETATED OR HAVE EXPOSED LEDGE. THE EXISTING SHAPE OF THE PROJECT AREA CAN BE SEEN BY LOOKING AT THE "EPSC EXISTING SITE" PLAN (SHEET 27) WHERE THE EXISTING CONTOURS ARE SHOWN.

1.2.4 VEGETATION:

THE VEGETATION SURROUNDING THE PROJECT SITE CONSISTS OF VARIOUS GRASSES, SHRUBS AND WOODED AREAS. IMPACTS TO VEGETATION WILL BE LIMITED TO THAT EFFECTED BY THE CONSTRUCTION OF THE NEW BRIDGE AND REMOVAL OF THE EXISTING TRUSS BRIDGE AS WELL AS THE EXISTING TEMPORARY BRIDGE.

FOLLOWING THE CONSTRUCTION OF THE NEW BRIDGE, THE SLOPES WILL BE STABILIZED WITH STONE FILL, TYPE III AND VEGETATION WILL BE RE-ESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES.

1.2.5 SOILS:

| SOIL NAME | DEPTH | ERODIBILITY | K-VALUE |
|------------------------------|-------|-------------|---------|
| ADAMS LOAMY FINE SAND (168) | 0-60" | SLIGHT | 0.17 |
| COLTON LOAMY FINE SAND (508) | 0-60" | SLIGHT | 0.17 |
| COLTON LOAMY FINE SAND (50E) | 0-60" | SEVERE | 0.17 |
| OHDAWA FINE SANDY LOAM (23) | 0-60" | SLIGHT | 0.24 |

ADAMS SOIL (168) IS A VERY DEEP, GENTLE SLOPING (2 TO 8% SLOPES), WELL DRAINIED TO EXCESSIVELY DRAINED SOIL ON TERRACES, KNOLLS AND RIDGES.

COLTON SOIL (508) IS A VERY DEEP, GENTLE SLOPING (2 TO 8% SLOPES), EXCESSIVELY DRAINED SOIL ON TERRACES, KNOLLS AND RIDGES.

COLTON SOIL (50E) IS A VERY DEEP, STEEP AND VERY STEEP (25 TO 60% SLOPES), EXCESSIVELY DRAINED SOIL ON TERRACES DISSECTED BY DRAINAGEWAYS AND ON THE TOPS OF KNOLLS AND RIDGES.

OHDAWA SOIL CONSISTS OF VERY DEEP, NEARLY LEVEL (0 TO 3% SLOPES), WELL DRAINED SOIL OF FLOOD PLAINS, FLOODED BY STREAM OVERFLOW FOR BRIEF PERIODS.

1.2.6 SENSITIVE RESOURCE AREAS

SEE EPSC EXISTING SITE PLAN (SHEET 27) FOR RESOURCE AREAS.

THERE ARE NO AGRICULTURAL LANDS LOCATED WITHIN THE PROJECT LIMITS.

THERE ARE ARCHEOLOGICAL LANDS LOCATED WITHIN THE PROJECT LIMITS. ANY DISTURBANCE WILL BE LIMITED TO FILL.

THE EXISTING BRIDGE IS LOCATED WITHIN A HISTORIC DISTRICT.

NO "THREATENED & ENDANGERED SPECIES" HAVE BEEN IDENTIFIED WITHIN THE PROJECT LIMITS.

THERE ARE NO KNOWN WETLANDS LOCATED WITHIN THE PROJECT LIMITS.

2. ALL AREAS MUST HAVE TEMPORARY OR FINAL STABILIZATION WITHIN 21 DAYS OF THE INITIAL DISTURBANCE AND STABILIZED THEREAFTER ON A DAILY BASIS. THE FOLLOWING EXCEPTIONS APPLY:

- STABILIZATION IS NOT REQUIRED IF WORK IS TO CONTINUE IN THE AREA WITHIN 24 HOURS AND NO PRECIPITATION IS FORECASTED FOR THE NEXT 24 HOURS.
- STABILIZATION IS NOT REQUIRED IF THE WORK IS OCCURRING IN A SELF-CONTAINED EXCAVATION WITH A DEPTH OF 2 FEET OR GREATER.

3. INSPECTIONS SHALL BE CONDUCTED AT LEAST ONCE EVERY 7 CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM EVENT RESULTING IN THE DISCHARGE OF STORMWATER FROM THE CONSTRUCTION SITE.

4. IF THERE IS A DISCHARGE OF VISIBLY DISCOLORED STORMWATER FROM THE CONSTRUCTION SITE OR FROM THE CONSTRUCTION SITE TO WATERS OF THE STATE, THE PERMITTEE SHALL TAKE IMMEDIATE CORRECTIVE ACTION.

5. IF THERE IS A DISCHARGE OF VISIBLY DISCOLORED STORMWATER FROM THE CONSTRUCTION SITE TO WATERS OF THE STATE, THE ON-SITE PLAN COORDINATOR SHALL, WITHIN 72 HOURS OF FIRST DISCOVERING THE DISCHARGE, SUBMIT A WRITTEN REPORT ABOUT THE DISCHARGE AND THE RESULTING CORRECTIVE ACTION TO THE VERMONT AGENCY OF NATURAL RESOURCES, DEPARTMENT OF ENVIRONMENTAL CONSERVATION (DEC).

RISK EVALUATION SHOULD CHANGES PRIOR TO OR DURING CONSTRUCTION RESULT IN A POTENTIAL CHANGE IN THE RISK OR SHOULD THE PROJECT BECOME PART OF A COMMON DEVELOPMENT PLAN, THEN THE SELECTED CONTRACTOR WILL BE RESPONSIBLE FOR ADDITIONAL PERMITTING WITH THE DEC VIA FILING OF THE APPROPRIATE NOTICE OF INTENT UNDER THE CONSTRUCTION PERMIT PROCESS.

1.4 EROSION PREVENTION AND SEDIMENT CONTROL (EPSC)

THE EROSION CONTROL PLANS ARE MEANT AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. THE WORK OUTLINED IN THIS NARRATIVE CONSISTS OF APPLYING MEASURES THROUGHOUT THE LIFE OF THE PROJECT MINIMIZING SEDIMENT TRANSPORT TO THE RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER POLLUTION PREVENTION CONTROLS.

PREVENTING INITIAL SOIL EROSION IS MUCH MORE EFFECTIVE THAN TREATING ERODED SEDIMENT. MAINTAINING VEGETATED BUFFERS ALONG STREAM BANKS, WETLANDS OR OTHER SENSITIVE AREAS IS A CRUCIAL EROSION AND SEDIMENT CONTROL MEASURE THAT SHOULD BE ESTABLISHED WHEREVER POSSIBLE.

ALL MEASURES SHALL BE REGULARLY MAINTAINED AND SHALL BE CHECKED FOR SEDIMENT BUILD-UP. SEDIMENT SHALL BE DISPOSED AT AN APPROVED SITE WHERE IT WILL NOT BE SUBJECT TO EROSION.

(REFER TO THE LOW RISK SITE HANDBOOK AND APPROPRIATE DETAIL SHEETS FOR EACH PRACTICE REQUIRED ON THE PROJECT TO INCLUDE BUT NOT LIMITED TO THE FOLLOWING.)

1.4.1 MARK SITE BOUNDARIES

PRIOR TO ANY CONSTRUCTION ACTIVITIES, THE PROJECT DEMARCATION FENCING (PDF) SHALL BE PLACED ALONG THE PERIMETER OF THE PROJECT AS SHOWN ON THE EPSC CONSTRUCTION SITE PLAN (SHEET 28). THE INSTALLATION OF THE PDF WILL BE PERFORMED SUCH THAT NO VEGETATION ON THE OUTSIDE OF THE FENCING IS DISTURBED.

1.4.2 LIMIT DISTURBANCE AREA

THE CUT/FILL LIMITS SHOWN ON THE EPSC CONSTRUCTION SITE PLAN (SHEET 28), ARE THE ABSOLUTE LIMITS OF EARTH DISTURBANCE. PRESERVE EXISTING VEGETATION, SHRUBS, AND TREES WHENEVER POSSIBLE.

1.4.3 STABILIZE CONSTRUCTION ENTRANCE

TRACKING PADS SHALL BE INSTALLED AS SHOWN AND DESCRIBED IN THE LOW RISK SITE HANDBOOK.

1.4.4 INSTALL SILT FENCE

SILT FENCE SHALL BE PLACED ALONG CONTOUR LINE AT LOCATIONS ILLUSTRATED ON THE EPSC CONSTRUCTION PLAN (SHEET 28). SILT FENCE SHALL BE INSTALLED AS SHOWN AND DESCRIBED IN THE LOW RISK SITE HANDBOOK.

1.4.5 DIVERT UPLAND RUNOFF

THE CONTRACTOR SHALL CONTROL ALL SEDIMENT-LOADED RUNOFF WITHIN THE PROJECT SITE. CLEAN RUNOFF FROM OUTSIDE THE PROJECT SITE SHALL BE ROUTED AROUND THE PROJECT SITE USING DIVERSION BERMS, DIVERSION CHANNELS, AND TEMPORARY OR PERMANENT CULVERTS IF PRACTICAL.

1.4.6 SLOW DOWN CHANNELIZED RUNOFF

STONE CHECK DAMS SHALL BE PLACED AT LOCATION OF CONCENTRATED FLOW AS ILLUSTRATED ON THE EPSC CONSTRUCTION SITE PLAN (SHEET 28). CHECK DAMS SHALL BE INSTALLED AS SHOWN AND DESCRIBED IN THE LOW RISK SITE HANDBOOK.

1.4.7 CONSTRUCT PERMANENT CONTROLS

TYPE III STONE SHALL BE PLACED ALONG TO STABILIZE SLOPES AROUND ABUTMENTS. TYPE II STONE SHALL BE PLACED ON THE STEEP SLOPES BETWEEN STATIONS 36+20 RT AND 36+30 RT. SEE EPSC FINAL SITE PLAN (SHEET 29) FOR LOCATION. GEOTEXTILE UNDER STONE FILL WILL BE USED TO INCREASE THE EFFECTIVENESS OF THE STONE FILL PREVENTING EROSION.

1.4.8 STABILIZE EXPOSED SOIL

ALL AREAS OF DISTURBANCE MUST HAVE TEMPORARY OR FINAL STABILIZATION WITHIN 7 DAYS OF THE INITIAL DISTURBANCE. AFTER THIS TIME, ANY DISTURBANCE IN THE AREA MUST BE STABILIZED AT THE END OF EACH WORK DAY. THE FOLLOWING EXCEPTIONS APPLY:

- STABILIZATION IS NOT REQUIRED IF WORK IS TO CONTINUE IN THE AREA WITHIN THE NEXT 24 HOURS AND THERE IS NO PRECIPITATION FORECAST FOR THE NEXT 24 HOURS.
- STABILIZATION IS NOT REQUIRED IF THE WORK IS OCCURRING IN A SELF-CONTAINED EXCAVATION (I.E. NO OUTLET) WITH A DEPTH OF 2 FEET OR GREATER.

WHEREVER FEASIBLE, TRACKING AND MULCHING WILL BE USED TO TEMPORARILY STABILIZE SLOPES. USE TRACKING FOR SHORT TERM (TWO WEEKS) EXPOSED SLOPES. DRIVE EQUIPMENT ON THE SLOPES TO LEAVE TRACK (SMALL CHECK DAMS) THAT WILL CATCH WATER FLOW. STABILIZE SLOPES WITHIN 48 HOURS OR SOONER CONSIDERING WEATHER CONDITIONS.

TEMPORARY EROSION MATTING SHALL BE PLACED ALONG THE PROPOSED SLOPES FROM STATION 33+70 LT TO 34+98 LT, 33+70 RT TO 33+97 RT, 34+14 RT TO 34+81 RT, 36+50 RT TO 37+50 RT, 36+75 LT TO 37+50 LT AS ILLUSTRATED ON THE EPSC CONSTRUCTION SITE PLAN (SHEET 28). EROSION MATTING SHALL BE INSTALLED AS SHOWN AND DESCRIBED IN THE LOW RISK SITE HANDBOOK.

SEEDING AND MULCHING WILL BE USED TO STABILIZE SLOPES. USE SEEDING FOR LONG TERM EXPOSED SLOPES. GRASS TAKES TWO WEEKS TO ESTABLISH ITSELF. STABILIZE SLOPES WITHIN 48 HOURS OR SOONER CONSIDERING WEATHER CONDITIONS.

1.4.9 WINTER STABILIZATION

AFTER SEPTEMBER 15 ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED TO 3" DEEP OR COVERED WITH ROLLED EROSION CONTROL PRODUCT.

IF THIS PROJECT EXTENDS PAST OCT. 15, THE EPSC PLAN SHALL BE RE-EVALUATED FOR THE PROPER PROCEDURES FOR WINTER CONSTRUCTION.

1.4.10 STABILIZE SOIL AT FINAL GRADE

SEEDING AND MULCHING ON ALL DISTURBED SIDE SLOPES TO ESTABLISH PERMANENT VEGETATION. SEE EPSC FINAL SITE PLAN (SHEET 29) FOR LOCATIONS OF AREAS TO BE RE-VEGETATED.

1.4.11 DEWATERING ACTIVITIES

IT IS NOT EXPECTED THAT DEWATERING WILL BE NECESSARY.

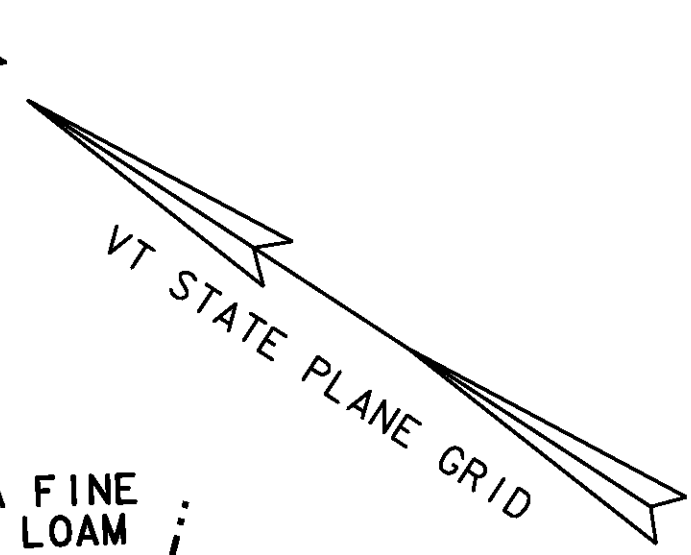
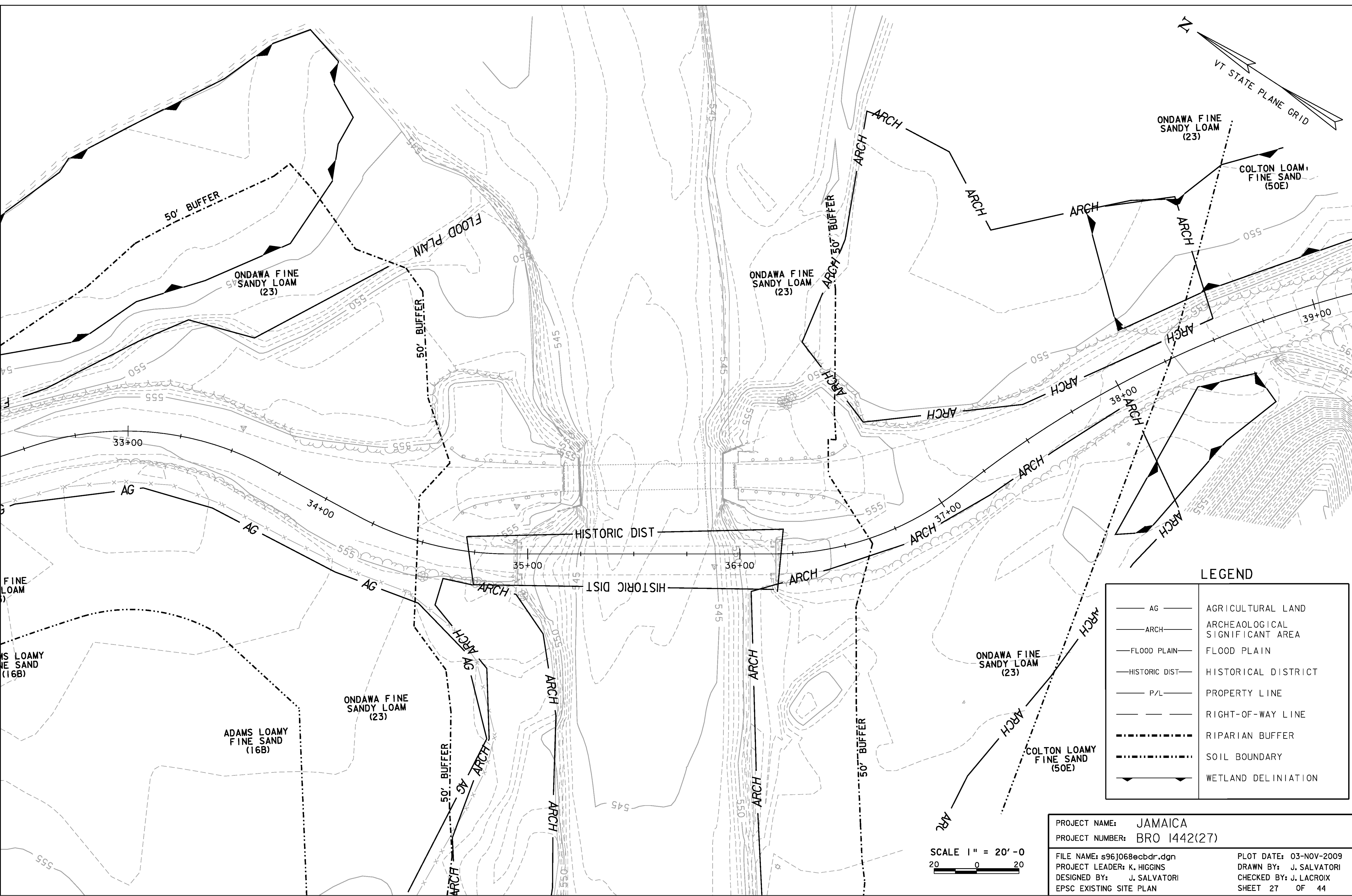
1.4.12 INSPECT YOUR SITE

INSPECT SITE BASED ON PERMIT AUTHORIZATION OR SPECIAL PROVISION REQUIREMENTS.

PROJECT NAME: JAMAICA
PROJECT NUMBER: BRO 1442(27)

FILE NAME: e96J0E6@psncar.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. LACROIX
EPSC NARRATIVE

PLOT DATE: 19-OCT-2009
DRAWN BY: R. PELLET
CHECKED BY: J. LACROIX
SHEET 26 OF 44



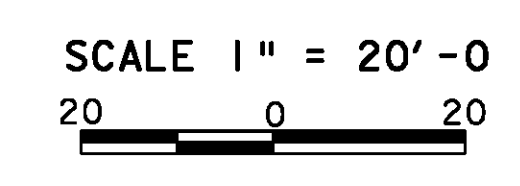
LEGEND

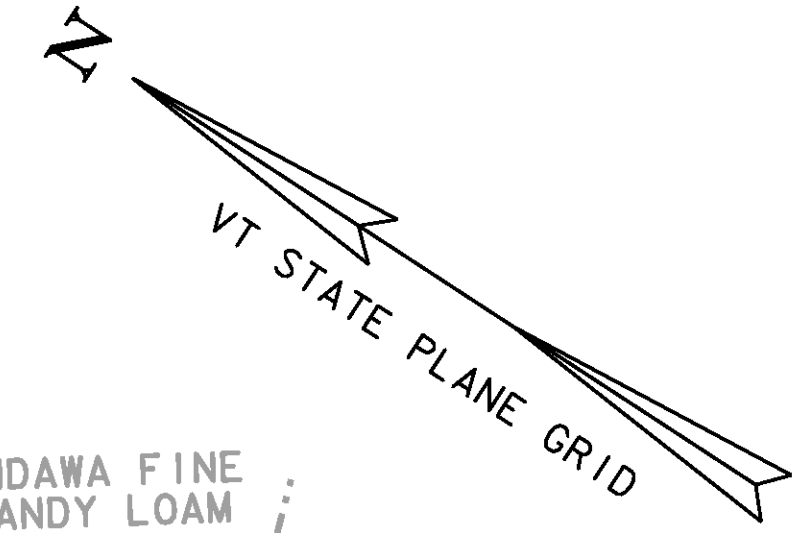
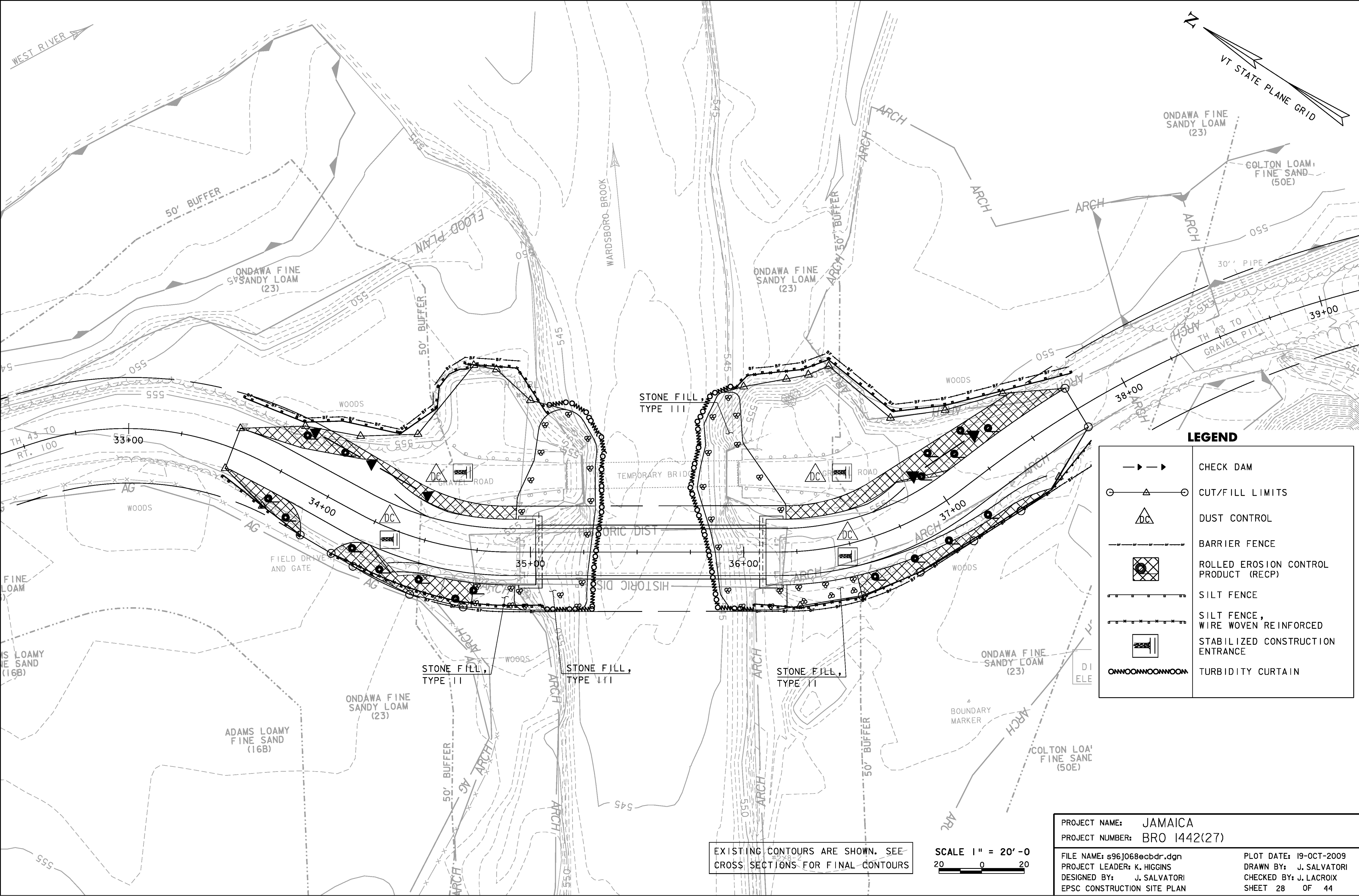
| | |
|-------------------|---------------------------------|
| — AG — | AGRICULTURAL LAND |
| — ARCH — | ARCHEAOLOGICAL SIGNIFICANT AREA |
| — FLOOD PLAIN — | FLOOD PLAIN |
| — HISTORIC DIST — | HISTORICAL DISTRICT |
| — P/L — | PROPERTY LINE |
| — — — | RIGHT-OF-WAY LINE |
| - - - - - | RIPARIAN BUFFER |
| - · - · - · | SOIL BOUNDARY |
| —▲—▲—▲— | WETLAND DELINIATION |

PROJECT NAME: JAMAICA
 PROJECT NUMBER: BRO 1442(27)

FILE NAME: s961068ecbdr.dgn
 PROJECT LEADER: K. HIGGINS
 DESIGNED BY: J. SALVATORI
 EPSC EXISTING SITE PLAN

PLOT DATE: 03-NOV-2009
 DRAWN BY: J. SALVATORI
 CHECKED BY: J. LACROIX
 SHEET 27 OF 44





LEGEND

| | |
|--|---------------------------------------|
| | CHECK DAM |
| | CUT/FILL LIMITS |
| | DUST CONTROL |
| | BARRIER FENCE |
| | ROLLED EROSION CONTROL PRODUCT (RECP) |
| | SILT FENCE |
| | SILT FENCE, WIRE WOVEN REINFORCED |
| | STABILIZED CONSTRUCTION ENTRANCE |
| | TURBIDITY CURTAIN |

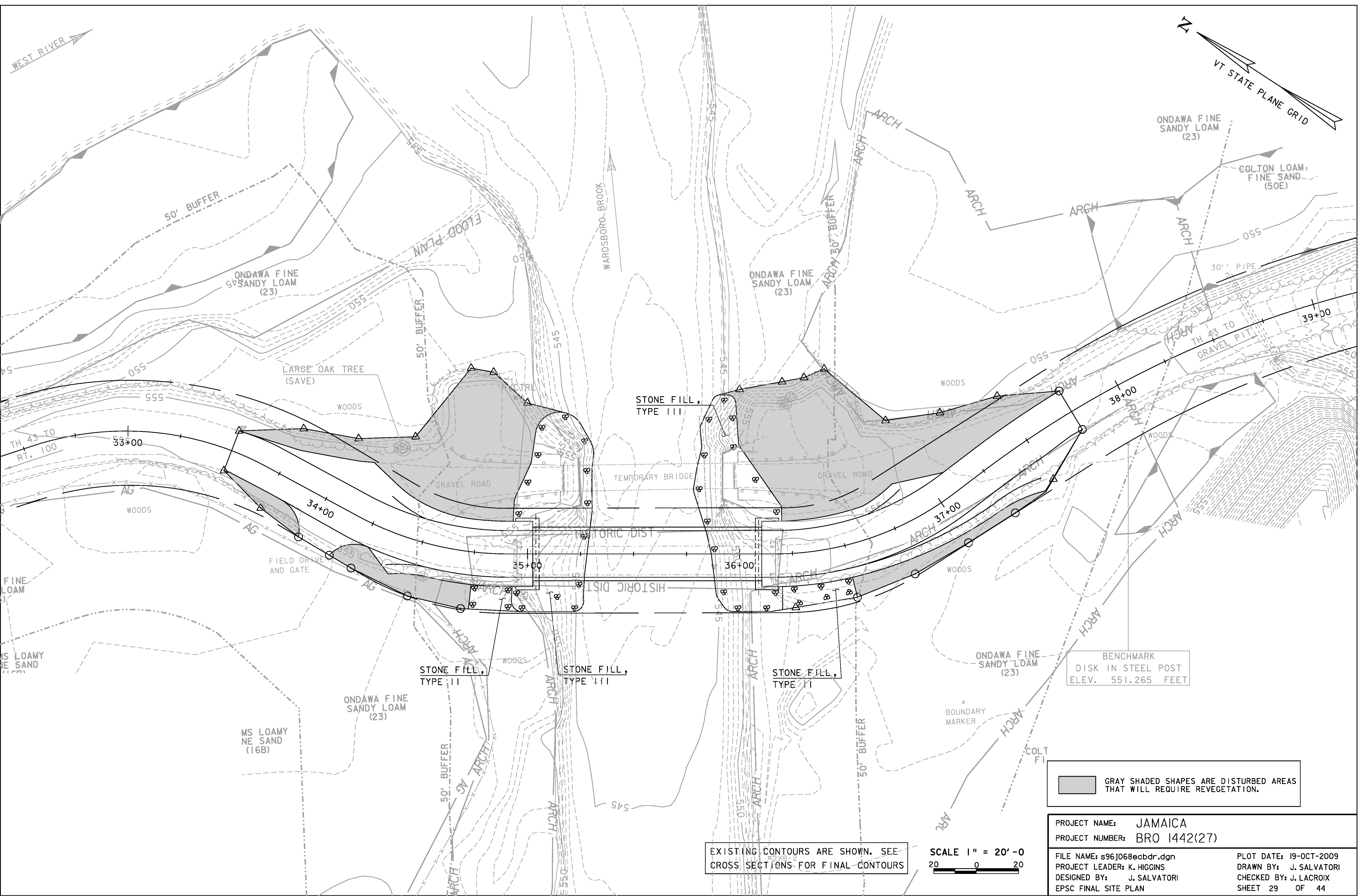
EXISTING CONTOURS ARE SHOWN. SEE CROSS SECTIONS FOR FINAL CONTOURS

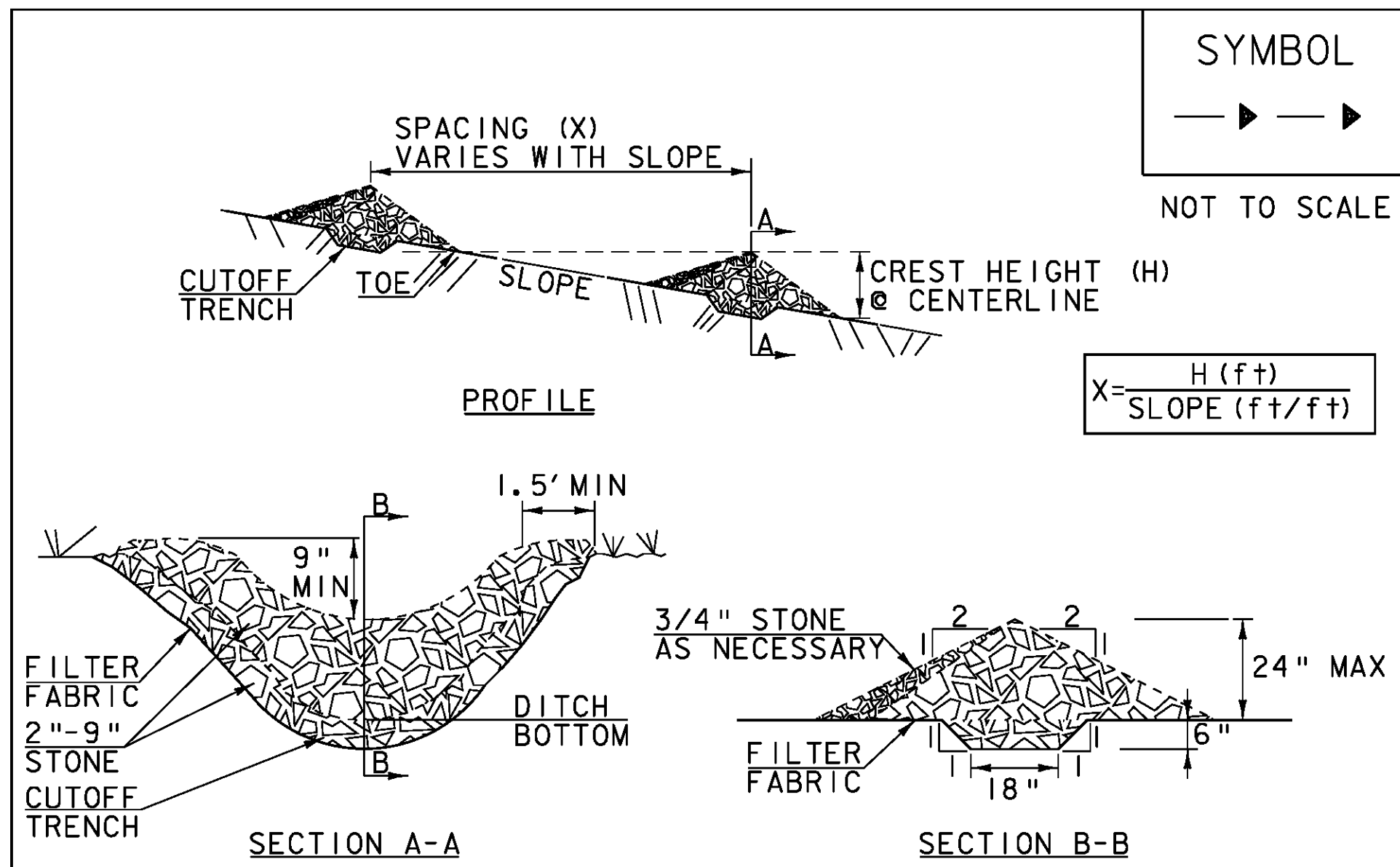
SCALE 1" = 20' - 0"
 20 0 20

PROJECT NAME: JAMAICA
 PROJECT NUMBER: BRO 1442(27)

FILE NAME: s96j068ecbdr.dgn
 PROJECT LEADER: K. HIGGINS
 DESIGNED BY: J. SALVATORI
 EPSC CONSTRUCTION SITE PLAN

PLOT DATE: 19-OCT-2009
 DRAWN BY: J. SALVATORI
 CHECKED BY: J. LACROIX
 SHEET 28 OF 44





SYMBOL

 NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

1. STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION.
2. CHECK DAMS SHALL BE SPACED SO THAT THE ELEVATION OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION AS THE TOE OF THE UPSTREAM DAM.
3. 3/4" FILTERING STONE MAY BE ADDED TO THE FACE OF THE CHECK DAM AS NECESSARY.
4. EXTEND THE STONE A MINIMUM OF 1.5' BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
5. PROTECT CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
6. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.
7. MAXIMUM DRAINAGE AREA 2 ACRES.

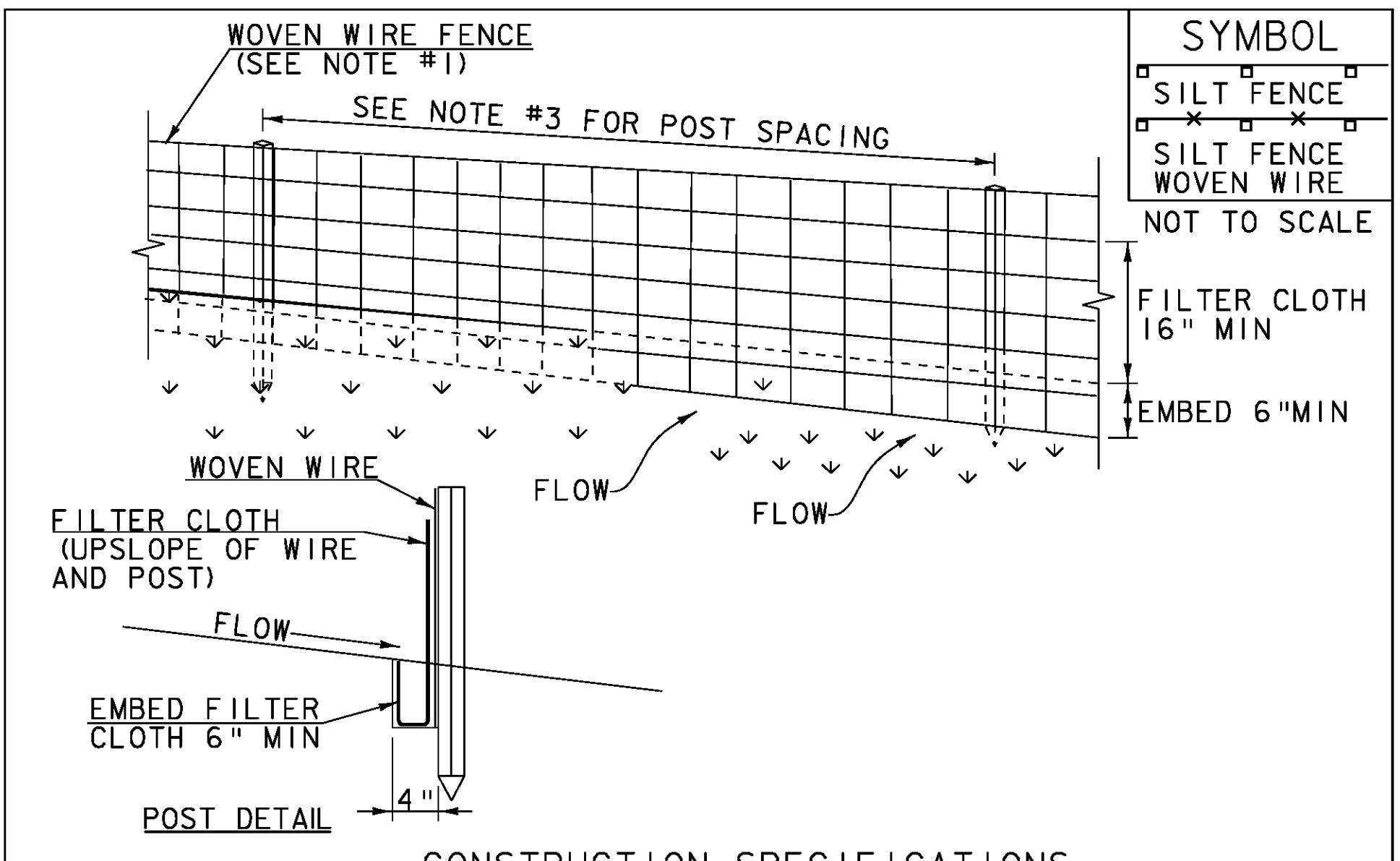
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
 ORIGINALLY DEVELOPED BY USDA-NRCS
 VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

CHECK DAM

NOTES:
 REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR TEMPORARY STONE CHECK DAM, TYPE I (PAY ITEM 653.25)

| REVISIONS | |
|-----------------|-----|
| MARCH 21, 2008 | WHF |
| JANUARY 8, 2009 | WHF |
| | |
| | |



SYMBOL

 SILT FENCE

 SILT FENCE WOVEN WIRE
 NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE REINFORCED FENCE IS REQUIRED WITHIN 100' UPSLOPE OF RECEIVING WATERS WHEN THE PROJECT FALLS UNDER A CONSTRUCTION STORMWATER PERMIT. WOVEN WIRE SHALL BE A MIN. 14 GAUGE WITH A 6" MAX. MESH OPENING.
2. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAF1100X, STABILINKA T140N OR APPROVED EQUIVALENT.
3. POST SPACING FOR WIRE-BACKED FENCE SHALL BE 10' MAXIMUM. FOR FILTER-CLOTH FENCE, WHEN ELONGATION IS >50%, POST SPACING SHALL NOT EXCEED 4' AND WHEN ELONGATION IS <50%, POST SPACING SHALL NOT EXCEED 6'.
4. WOVEN WIRE FENCE IS TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES. FILTER CLOTH IS TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY 6" AND FOLDED.
6. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN SEDIMENT REACHES HALF OF FABRIC HEIGHT.

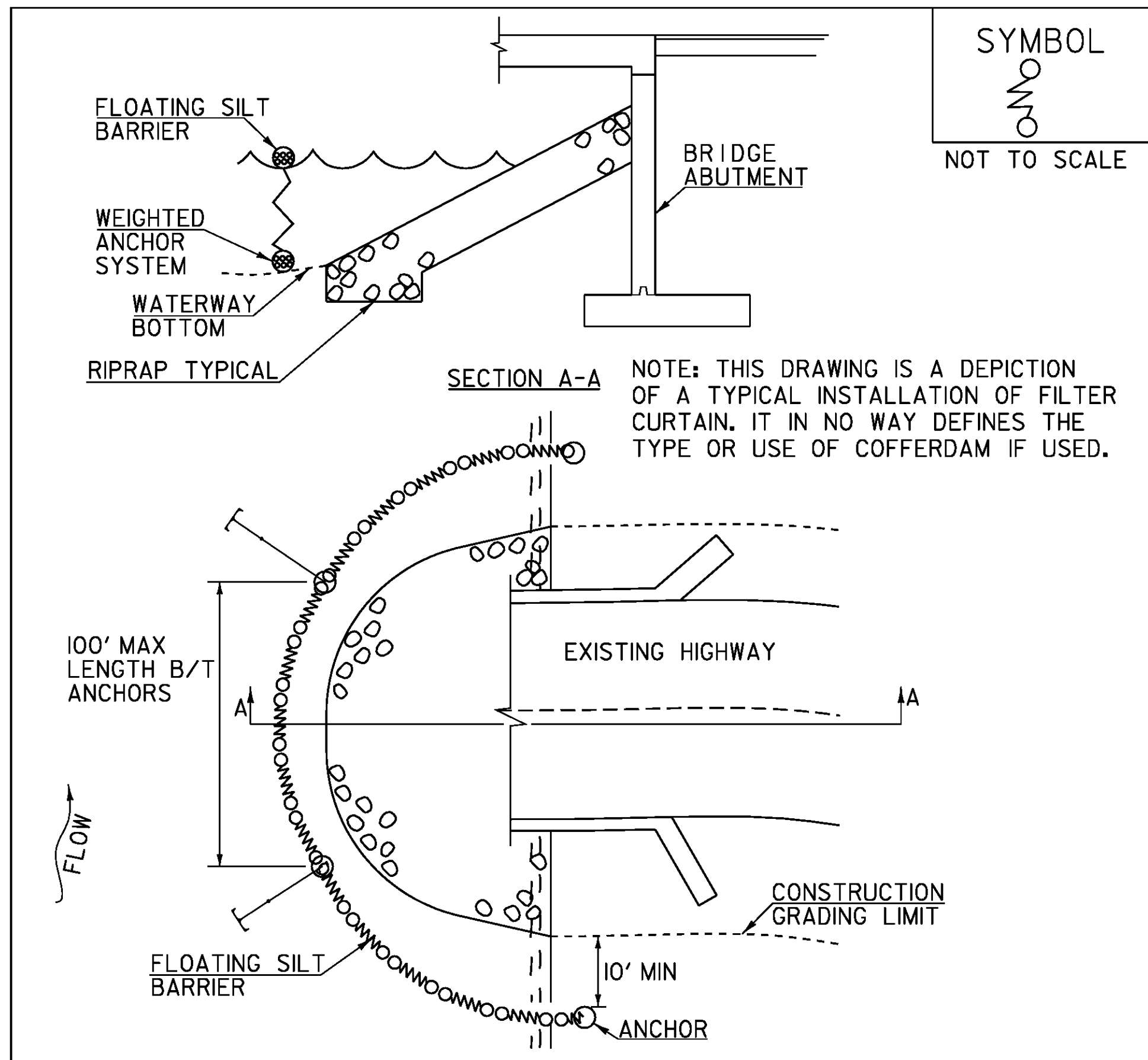
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
 ORIGINALLY DEVELOPED BY USDA-NRCS
 VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SILT FENCE

NOTES:
 REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 649 AND AS SHOWN IN THE PLANS FOR GEOTEXTILE FOR SILT FENCE (PAY ITEM 649.5) OR GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED (PAY ITEM 649.515).

| REVISIONS | |
|-------------------|-----|
| MARCH 21, 2008 | WHF |
| DECEMBER 11, 2008 | WHF |
| JANUARY 13, 2009 | WHF |
| | |
| | |



SYMBOL

 NOT TO SCALE

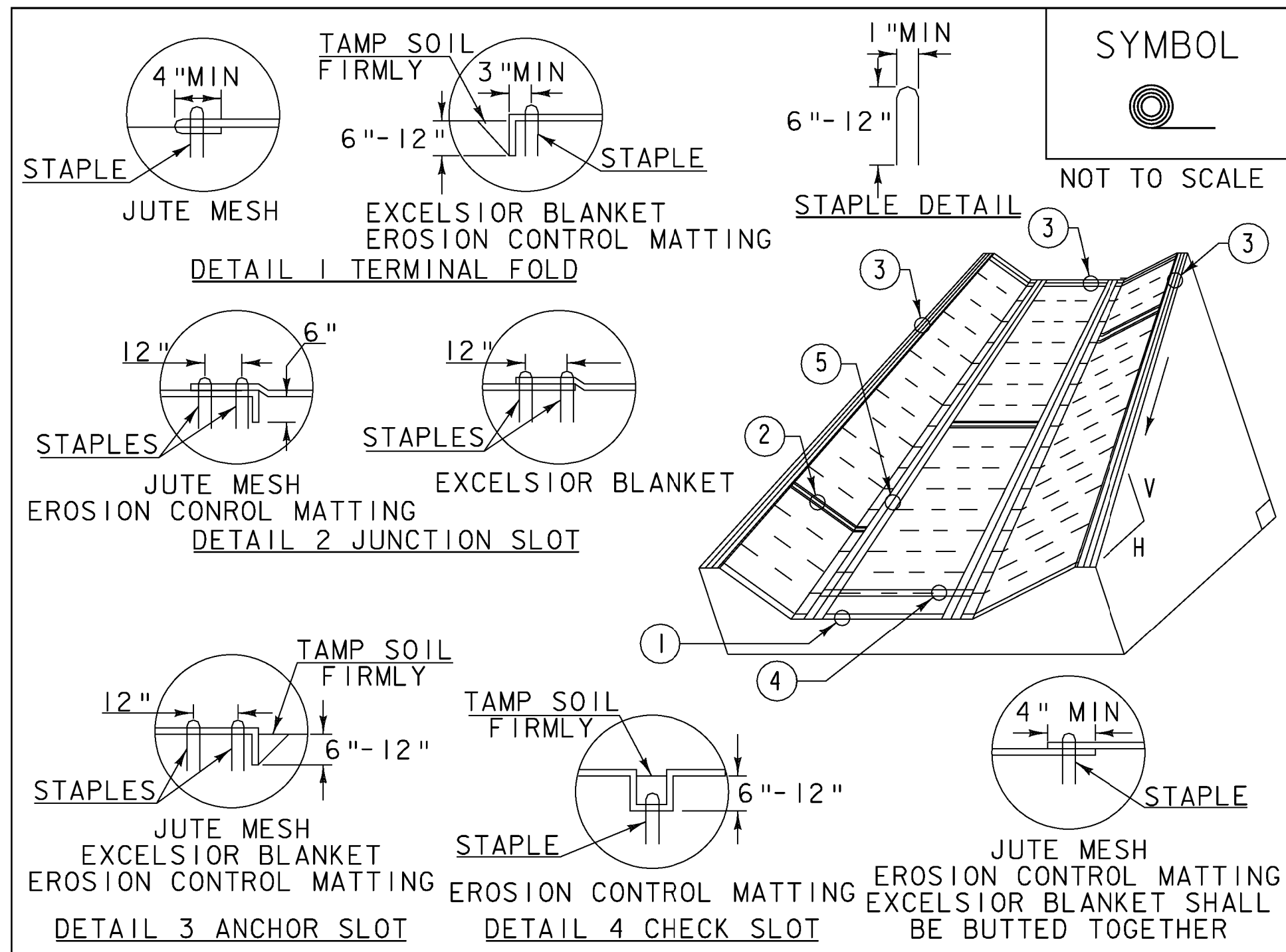
CONSTRUCTION SPECIFICATIONS

1. FILTER CURTAIN SHALL NOT BE PLACED ACROSS A FLOWING WATERWAY, OR IN A WATERWAY WITH STREAM VELOCITIES GREATER THAN 1.5 FEET/SECOND.
2. MAXIMUM 100' LENGTH BETWEEN ANCHORS.
3. LAST SECTION SHALL TERMINATE A MINIMUM OF 10' BEYOND LIMIT OF DISTURBANCE.
4. THE WEIGHTED ANCHOR SYSTEM SHALL BE A TYPE WHICH ALLOWS THE CURTAIN TO CONFORM TO THE BOTTOM OF THE WATERWAY.
5. THE CURTAIN SHALL BE REMOVED BY SLOWLY PULLING TOWARD THE SHORE MINIMIZING THE ESCAPE OF SEDIMENTS INTO WATERWAY.

FILTER CURTAIN

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 649 FOR GEOTEXTILE FOR FILTER CURTAIN (PAY ITEM 649.6).

| REVISIONS | |
|-------------------|-----|
| APRIL 1, 2008 | WHF |
| JANUARY 13, 2009 | WHF |
| SEPTEMBER 4, 2009 | WHF |
| | |
| | |



CONSTRUCTION SPECIFICATIONS

1. EROSION MATTING, CHECK SLOTS, SHALL BE SPACED IN DITCH CHANNEL SO THAT ONE OCCURS WITHIN EACH 50' ON SLOPES OF MORE THAN 4% AND LESS THAN 6%. ON SLOPES OF 6% OR MORE, THEY SHALL BE SPACED SO THAT ONE OCCURS WITHIN EACH 25'.
2. APPLY FERTILIZER, LIME SEED PRIOR TO PLACING MATTING.
3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4'X225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4'X150' ROLL OF MATERIAL.
4. DISTURBED AREAS SHALL BE SMOOTHLY GRADED. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.
5. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

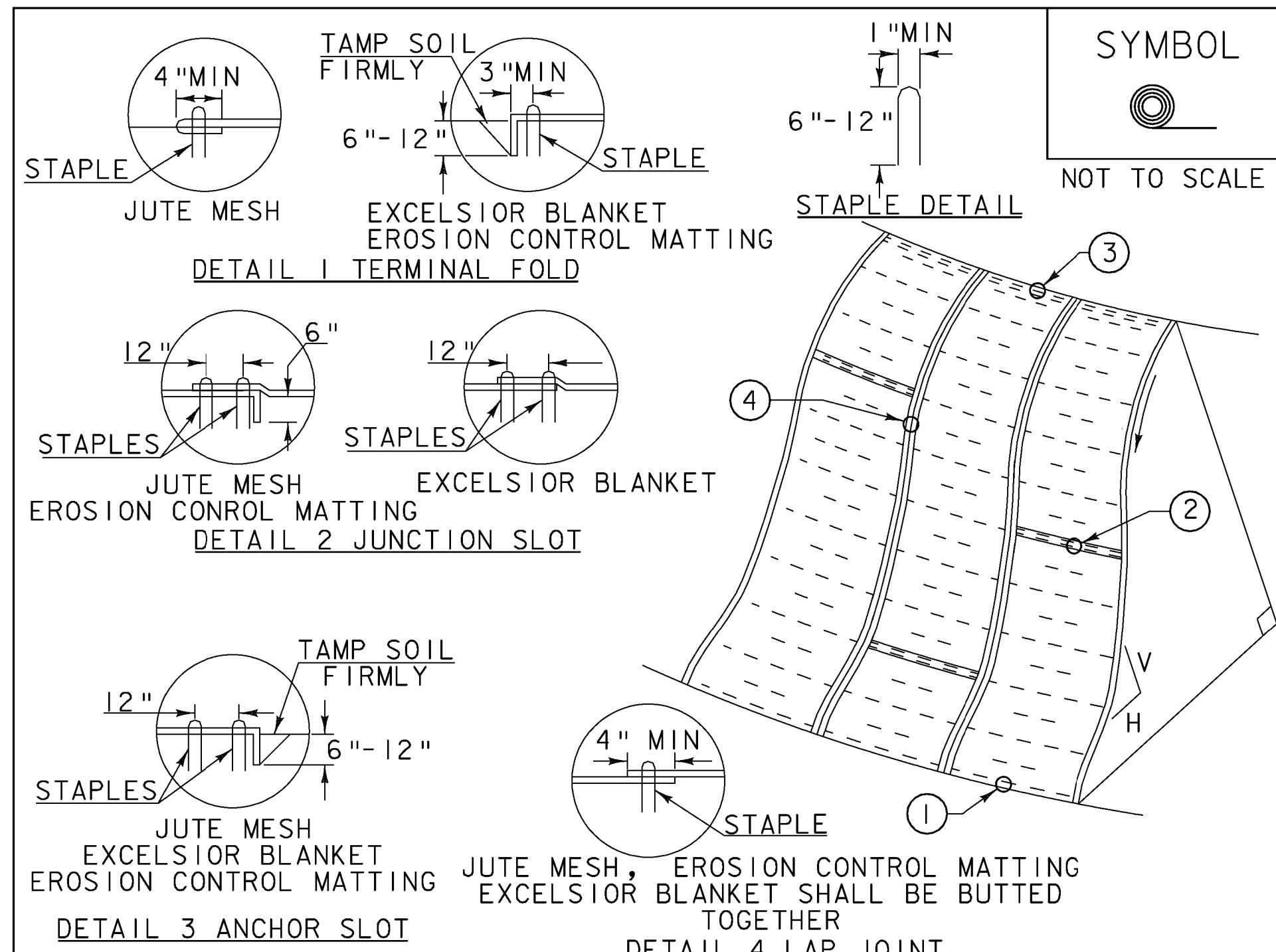
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

**ROLLED EROSION
CONTROL PRODUCT
(RECP) DITCH**

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR
EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM
THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL
GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION
653 AND AS SHOWN IN THE PLANS FOR TEMPORARY EROSION
MATTING (PAY ITEM 653.20).

| REVISIONS | |
|------------------|-----|
| MARCH 8, 2007 | JMF |
| APRIL 16, 2007 | WHF |
| JANUARY 13, 2009 | WHF |



CONSTRUCTION SPECIFICATIONS

1. APPLY TO SLOPES GREATER THAN 3H: IV OR WHERE NECESSARY TO AID IN ESTABLISHING VEGETATION.
2. APPLY FERTILIZER, LIME SEED PRIOR TO PLACING MATTING.
3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4'X225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4'X150' ROLL OF MATERIAL.
4. DISTURBED AREAS SHALL BE SMOOTHLY GRADED. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.
5. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

**ROLLED EROSION
CONTROL PRODUCT
(RECP) SIDE SLOPE**

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR
EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM
THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL
GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION
653 AND AS SHOWN IN THE PLANS FOR TEMPORARY EROSION
MATTING (PAY ITEM 653.20)

| REVISIONS | |
|------------------|-----|
| APRIL 16, 2007 | JMF |
| JANUARY 13, 2009 | WHF |

| VAOT RURAL AREA MIX | | | | | |
|---------------------|-----------|-----------|---------------------|--------|----------|
| % WEIGHT | LBS/AC | | NAME | GERM % | PURITY % |
| | BROADCAST | HYDROSEED | | | |
| 37.5% | 22.5 | 45 | CREeping RED FESCUE | 85% | 98% |
| 37.5% | 22.5 | 45 | TALL FESCUE | 90% | 95% |
| 5.0% | 3 | 6 | RED TOP | 90% | 95% |
| 15.0% | 9 | 18 | BIRDSFOOT TREFOIL | 85% | 98% |
| 5.0% | 3 | 6 | ANNUAL RYE GRASS | 85% | 95% |
| 100% | 60 | 120 | | | |

| VAOT URBAN AREA MIX | | | | | |
|---------------------|-----------|-----------|---------------------|--------|----------|
| % WEIGHT | LBS/AC | | NAME | GERM % | PURITY % |
| | BROADCAST | HYDROSEED | | | |
| 42.5% | 34 | 68 | CREeping RED FESCUE | 85% | 98% |
| 10.0% | 8 | 16 | PERENNIAL RYE GRASS | 90% | 95% |
| 42.5% | 34 | 68 | KENTUCKY BLUE GRASS | 85% | 85% |
| 5.0% | 4 | 8 | ANNUAL RYE GRASS | 85% | 95% |
| 100% | 80 | 160 | | | |

GENERAL GUIDANCE

| FERTILIZER | | LIME | |
|------------|-----------|------------|------------|
| BROADCAST | HYDROSEED | BROADCAST | HYDROSEED |
| 10/20/2010 | 19-19-19 | PELLETIZED | LIQUID |
| 500 LBS/AC | | 2 TONS/AC | 4.4 GAL/AC |

CONSTRUCTION GUIDANCE

1. RURAL SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED UPLAND (NON WETLAND) AREAS DISTURBED BY THE CONTRACTOR.
2. URBAN SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED LAWN AREAS DISTURBED BY THE CONTRACTOR.
3. ALL SEED MIXTURES: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.
4. FERTILIZER AND LIMESTONE: SHALL FOLLOW RATES SHOWN ON PLAN OR AS DIRECTED BY THE ENGINEER
5. HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, ACHIEVE 90% GROUND COVER OR AS DIRECTED BY THE ENGINEER.
6. TOPSOIL: TO BE USED WITH SEED AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.
7. HYDROSEEDING: ALTHOUGH GUIDANCE IS GIVEN ABOVE THE SITE CONDITIONS AND THE TYPE OF HYDROSEED WILL ULTIMATELY DICTATE THE AMOUNTS AND TYPES OF SOIL AMENDMENTS TO BE APPLIED
8. TURF ESTABLISHMENT: PLACING SEED, FERTILIZER, LIME AND MULCH PRIOR TO SEPTEMBER 15 AND AFTER APRIL 15 CAN BETTER ENSURE A VIGOROUS GROWTH OF GRASS.

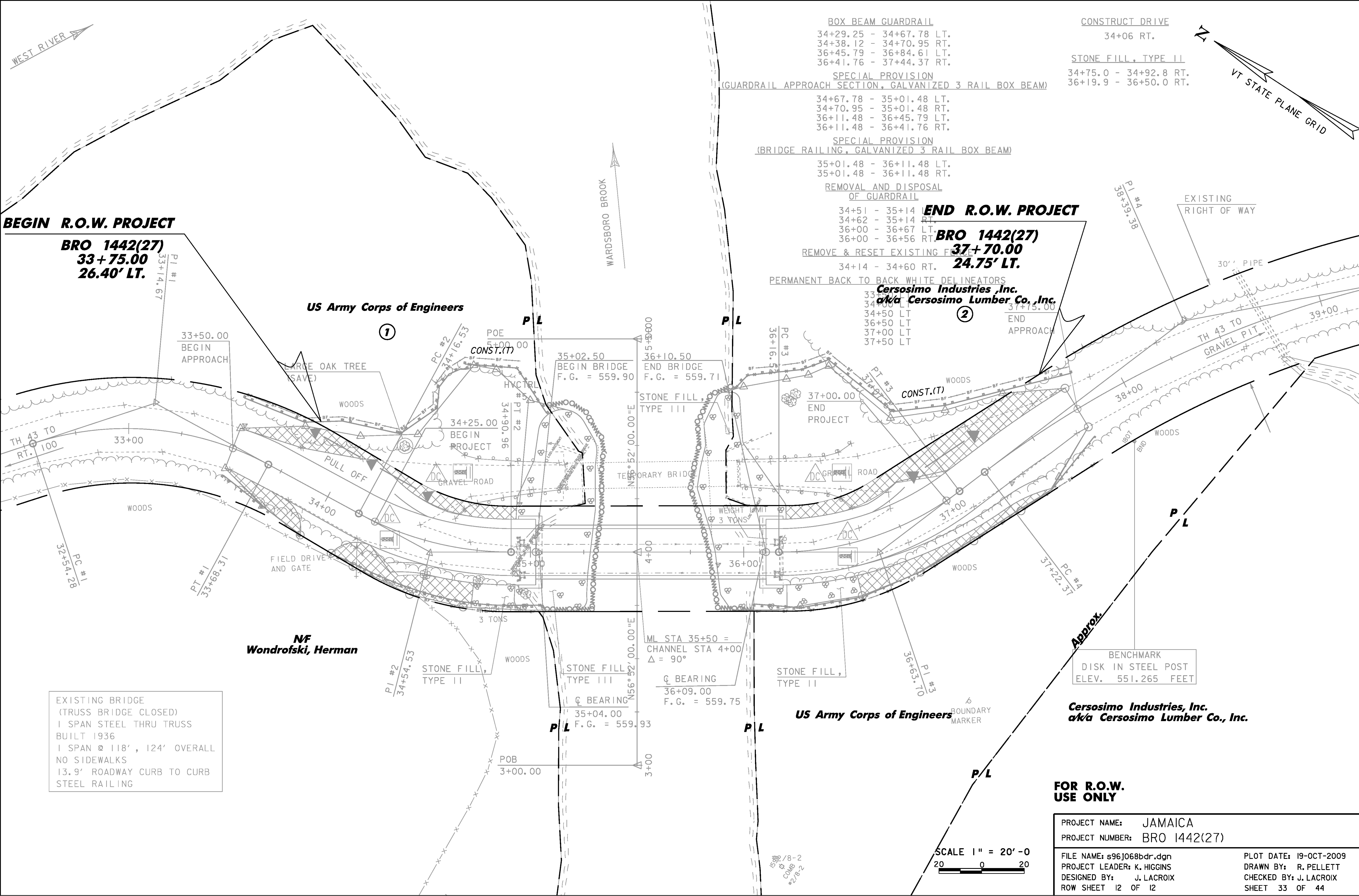
SEED

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 651 FOR SEED (PAY ITEM 651.15)

PROJECT NAME: JAMAICA
PROJECT NUMBER: BRO 1442(27)

FILE NAME: s96j068epsdet.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. SALVATORI
EPSC DETAILS - SHEET 2

PLOT DATE: 03-NOV-2009
DRAWN BY: R. PELLETT
CHECKED BY: J. LACROIX
SHEET 31 OF 44



BEGIN R.O.W. PROJECT
BRO 1442(27)
33+75.00
26.40' LT.

BOX BEAM GUARDRAIL
 34+29.25 - 34+67.78 LT.
 34+38.12 - 34+70.95 RT.
 36+45.79 - 36+84.61 LT.
 36+41.76 - 37+44.37 RT.

SPECIAL PROVISION
 (GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM)

34+67.78 - 35+01.48 LT.
 34+70.95 - 35+01.48 RT.
 36+11.48 - 36+45.79 LT.
 36+11.48 - 36+41.76 RT.

SPECIAL PROVISION
 (BRIDGE RAILING, GALVANIZED 3 RAIL BOX BEAM)

35+01.48 - 36+11.48 LT.
 35+01.48 - 36+11.48 RT.

CONSTRUCT DRIVE
 34+06 RT.

STONE FILL, TYPE III
 34+75.0 - 34+92.8 RT.
 36+19.9 - 36+50.0 RT.

END R.O.W. PROJECT
BRO 1442(27)
37+70.00
24.75' LT.

REMOVE & RESET EXISTING F.P.
 34+14 - 34+60 RT.

PERMANENT BACK TO BACK WHITE DELINEATORS
 34+14 - 34+60 RT.

Cersosimo Industries, Inc.
a/k/a Cersosimo Lumber Co., Inc.

US Army Corps of Engineers

NF
Wondrofski, Herman

US Army Corps of Engineers

Cersosimo Industries, Inc.
a/k/a Cersosimo Lumber Co., Inc.

EXISTING BRIDGE
 (TRUSS BRIDGE CLOSED)
 1 SPAN STEEL THRU TRUSS
 BUILT 1936
 1 SPAN @ 118', 124' OVERALL
 NO SIDEWALKS
 13.9' ROADWAY CURB TO CURB
 STEEL RAILING

FOR R.O.W.
USE ONLY

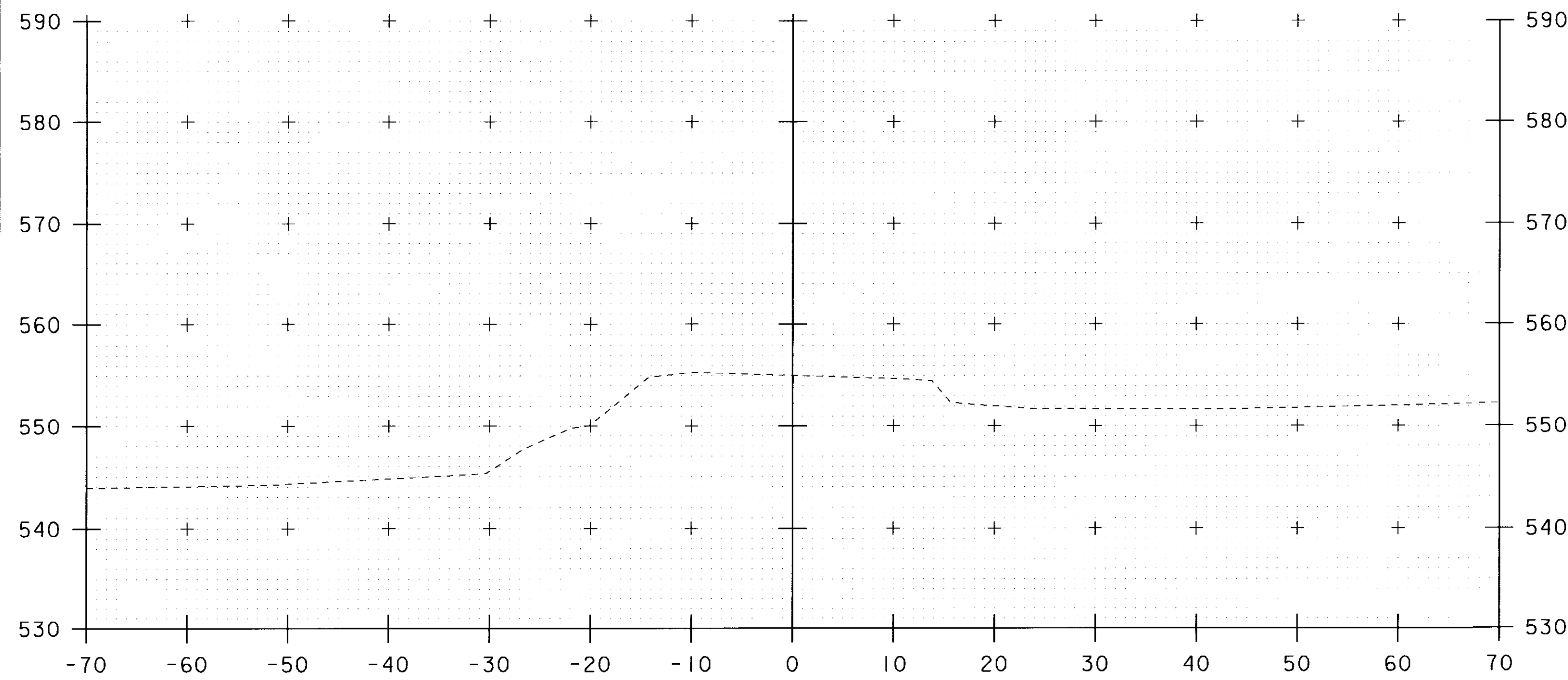
PROJECT NAME: JAMAICA
 PROJECT NUMBER: BRO 1442(27)

FILE NAME: s961068bdr.dgn
 PROJECT LEADER: K. HIGGINS
 DESIGNED BY: J. LACROIX
 ROW SHEET 12 OF 12

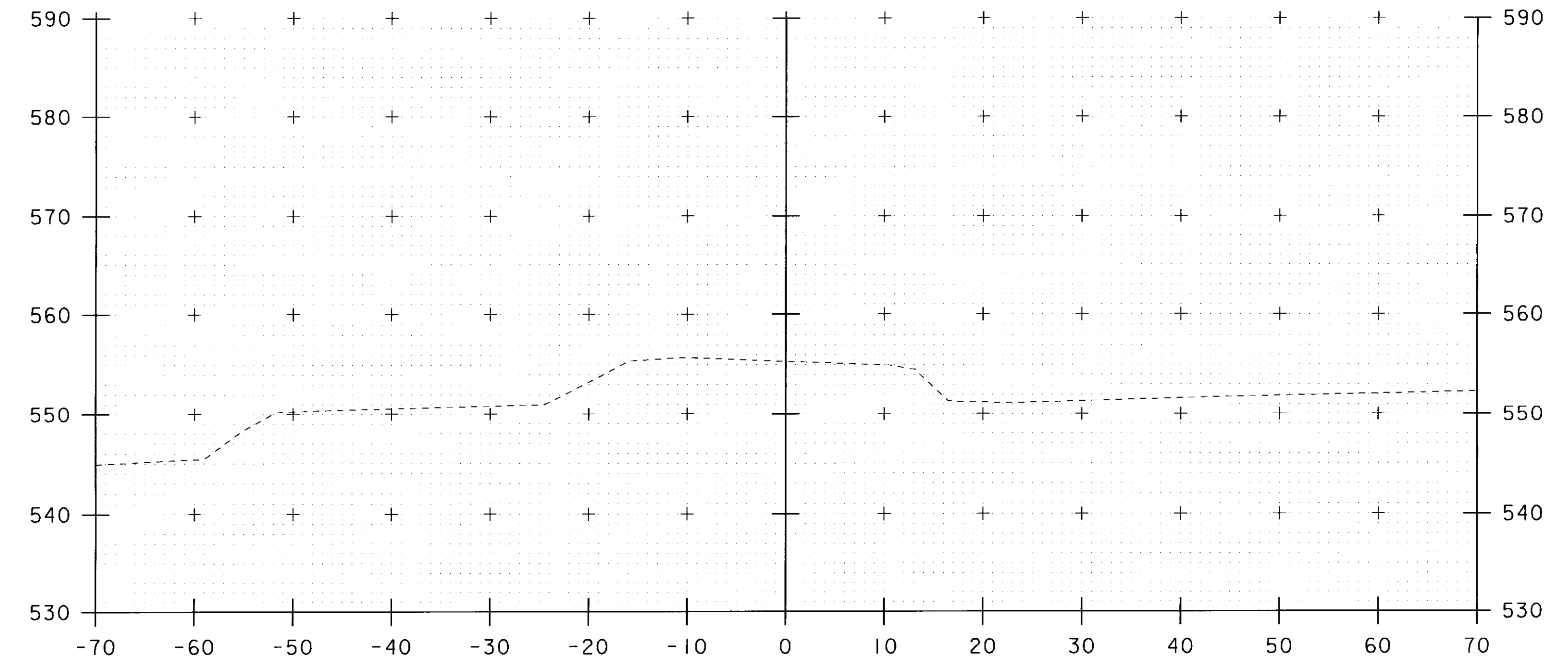
PLOT DATE: 19-OCT-2009
 DRAWN BY: R. PELLETT
 CHECKED BY: J. LACROIX
 SHEET 33 OF 44

SCALE 1" = 20'-0"
 20 0 20

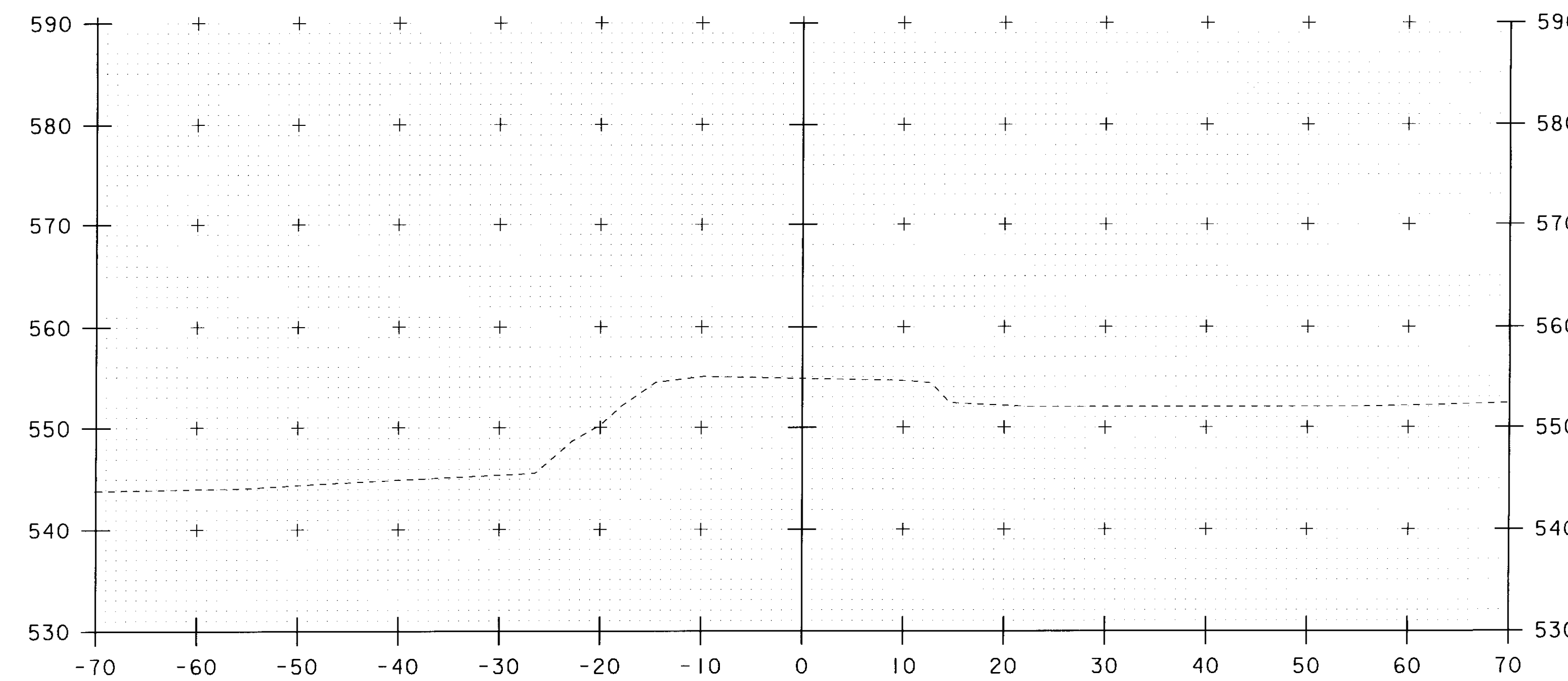
15/8-2
 10/16
 2/8-2



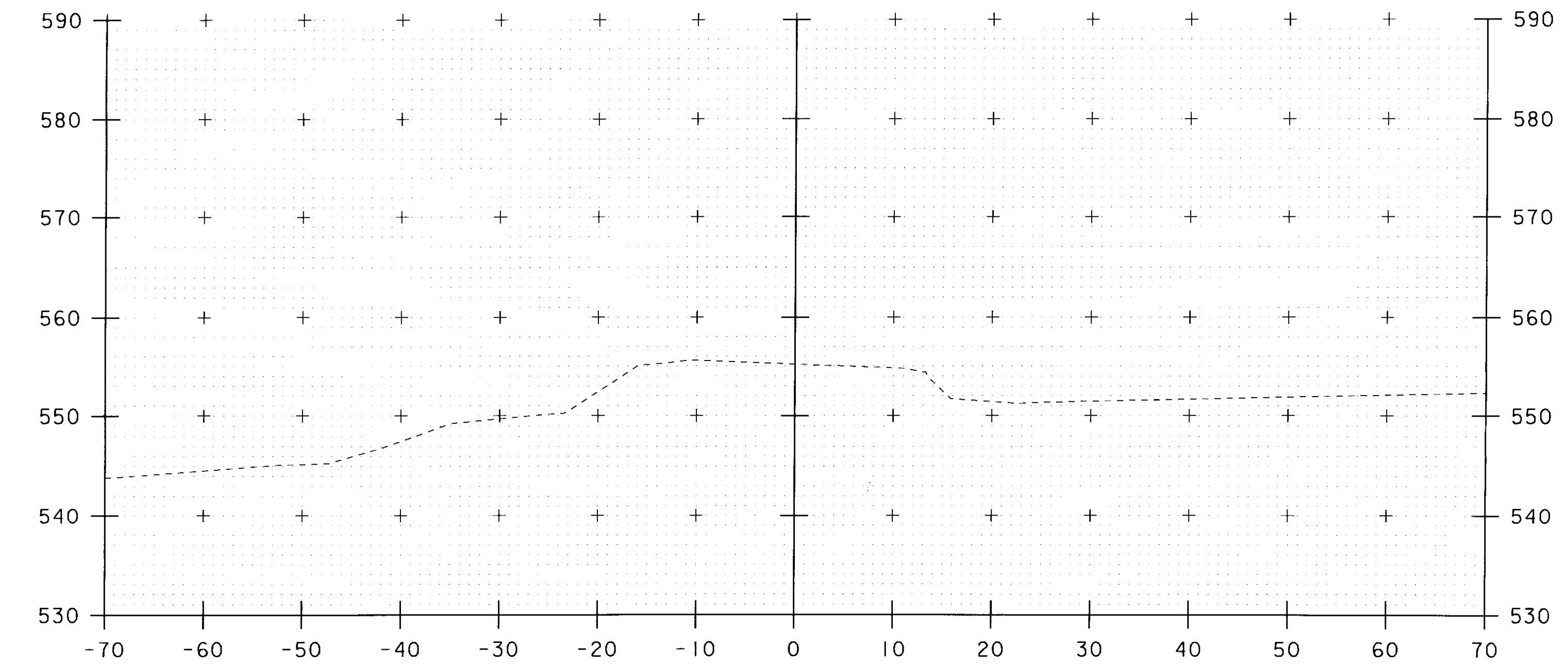
32+75



33+25




32+50



33+00

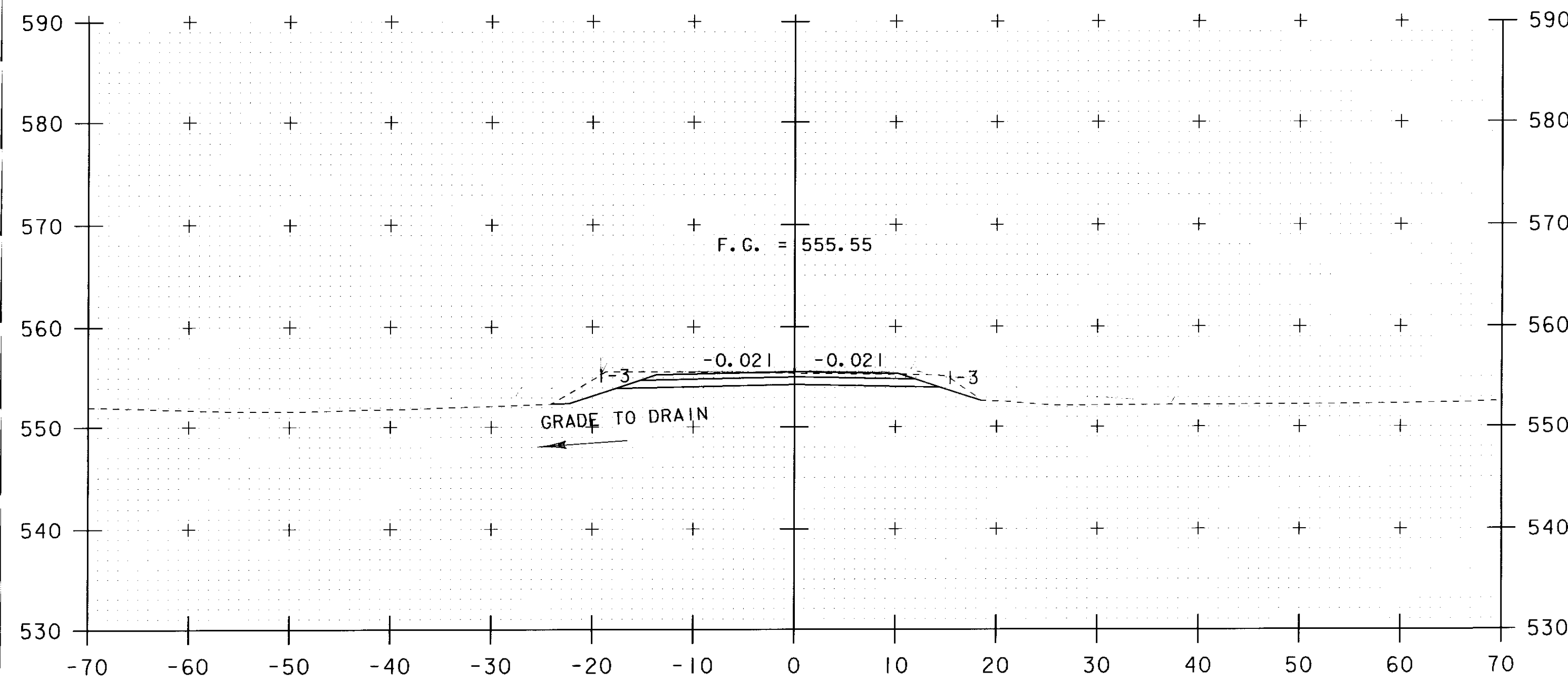
STA. 32+50 TO STA. 33+25

SCALE 1" = 10'-0"


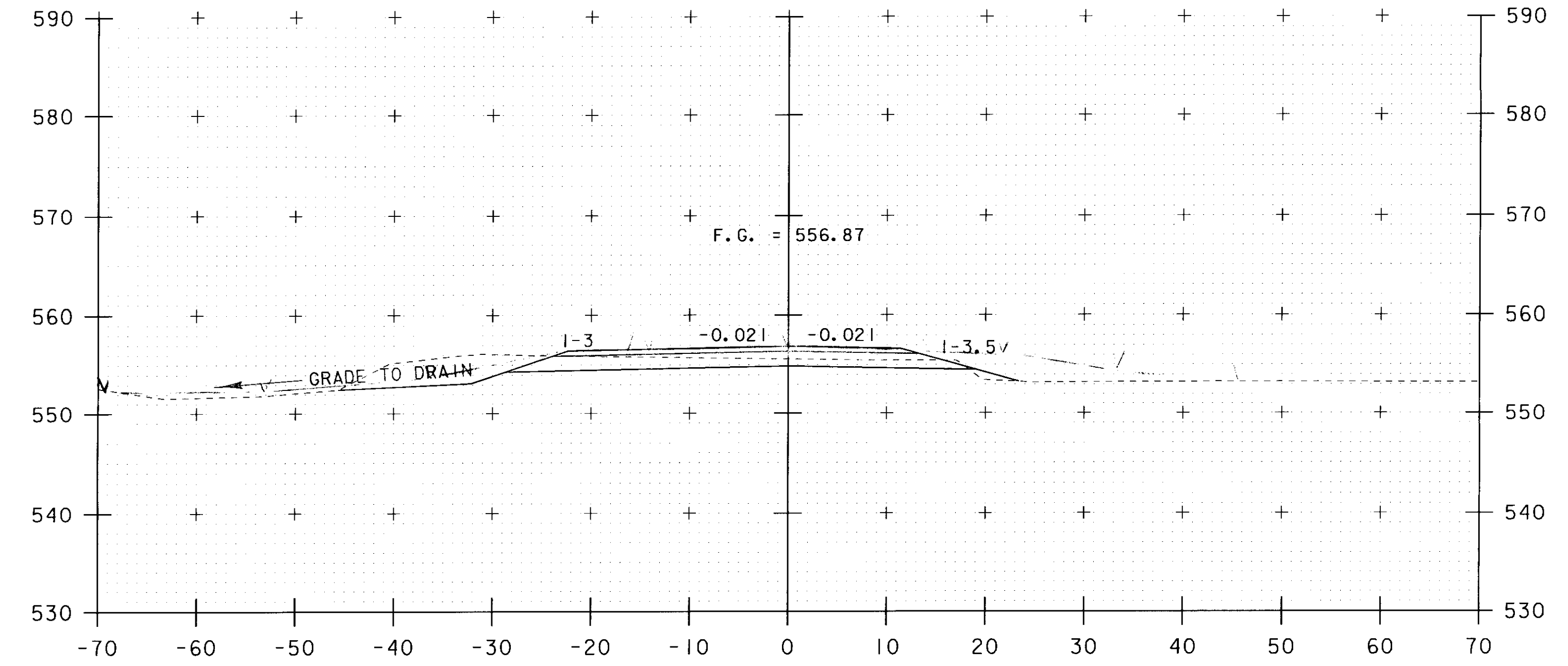
PROJECT NAME: JAMAICA
 PROJECT NUMBER: BRO 1442(27)

FILE NAME: s96J068xsl.dgn
 PROJECT LEADER: K. HIGGINS
 DESIGNED BY: J. LACROIX
 ROADWAY CROSS SECTIONS #1

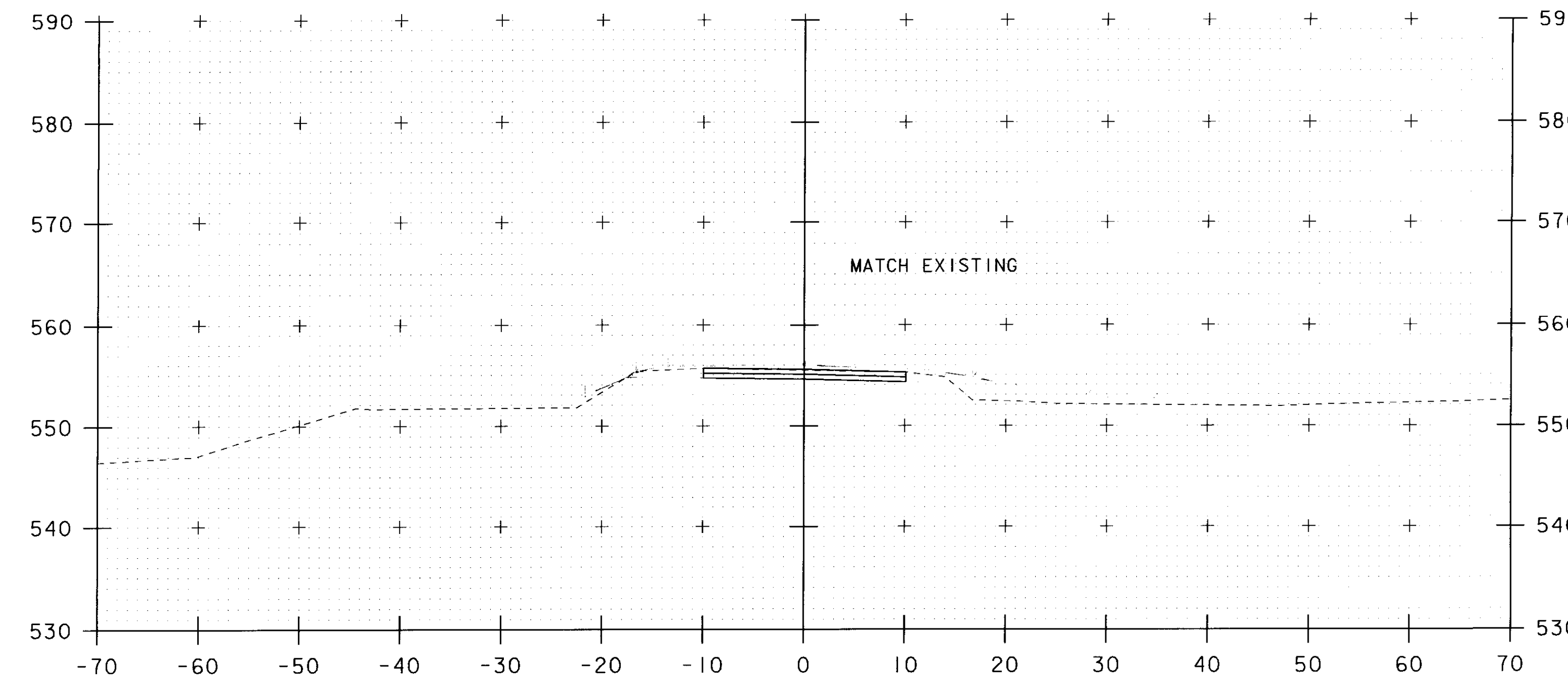
PLOT DATE: 23-SEP-2010
 DRAWN BY: R. PELLETT
 CHECKED BY: J. LACROIX
 SHEET 34 OF 45



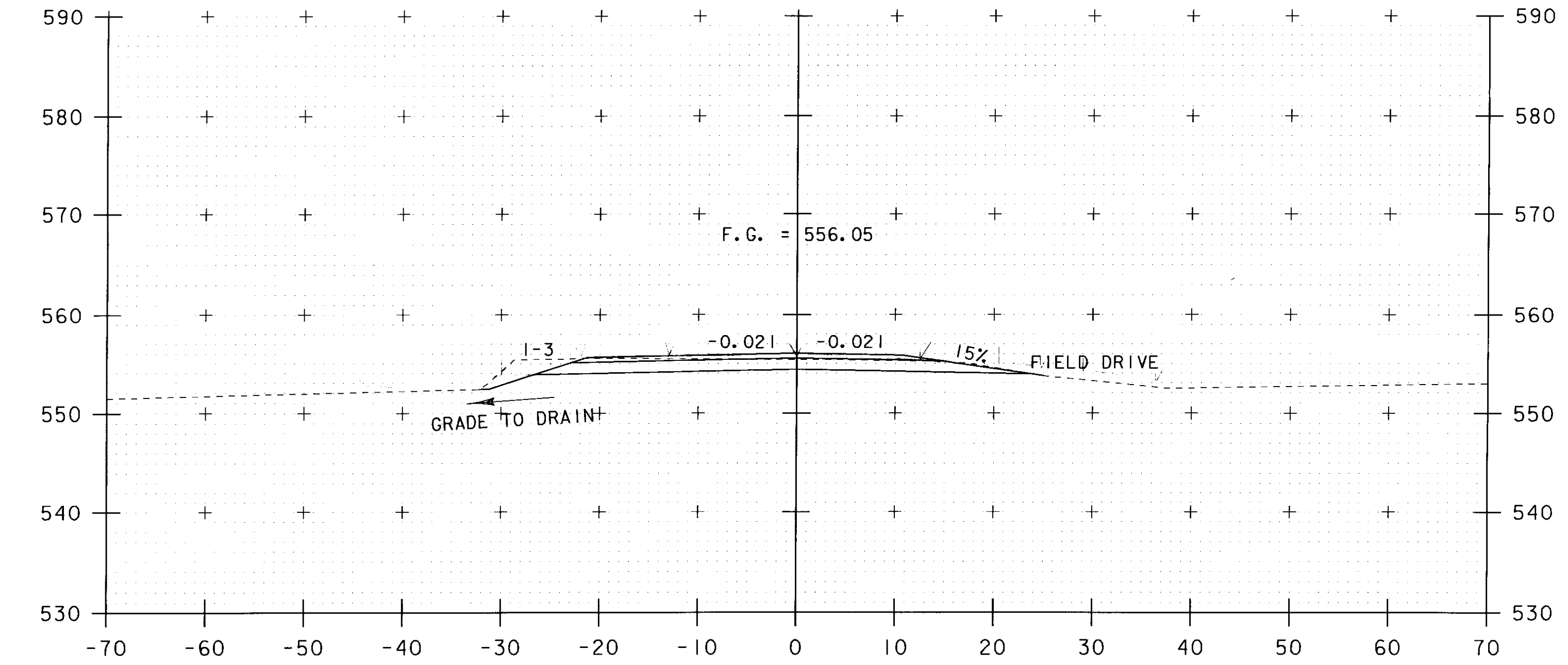
33+75



34+25
BEGIN PROJECT



33+50
BEGIN APPROACH



34+00

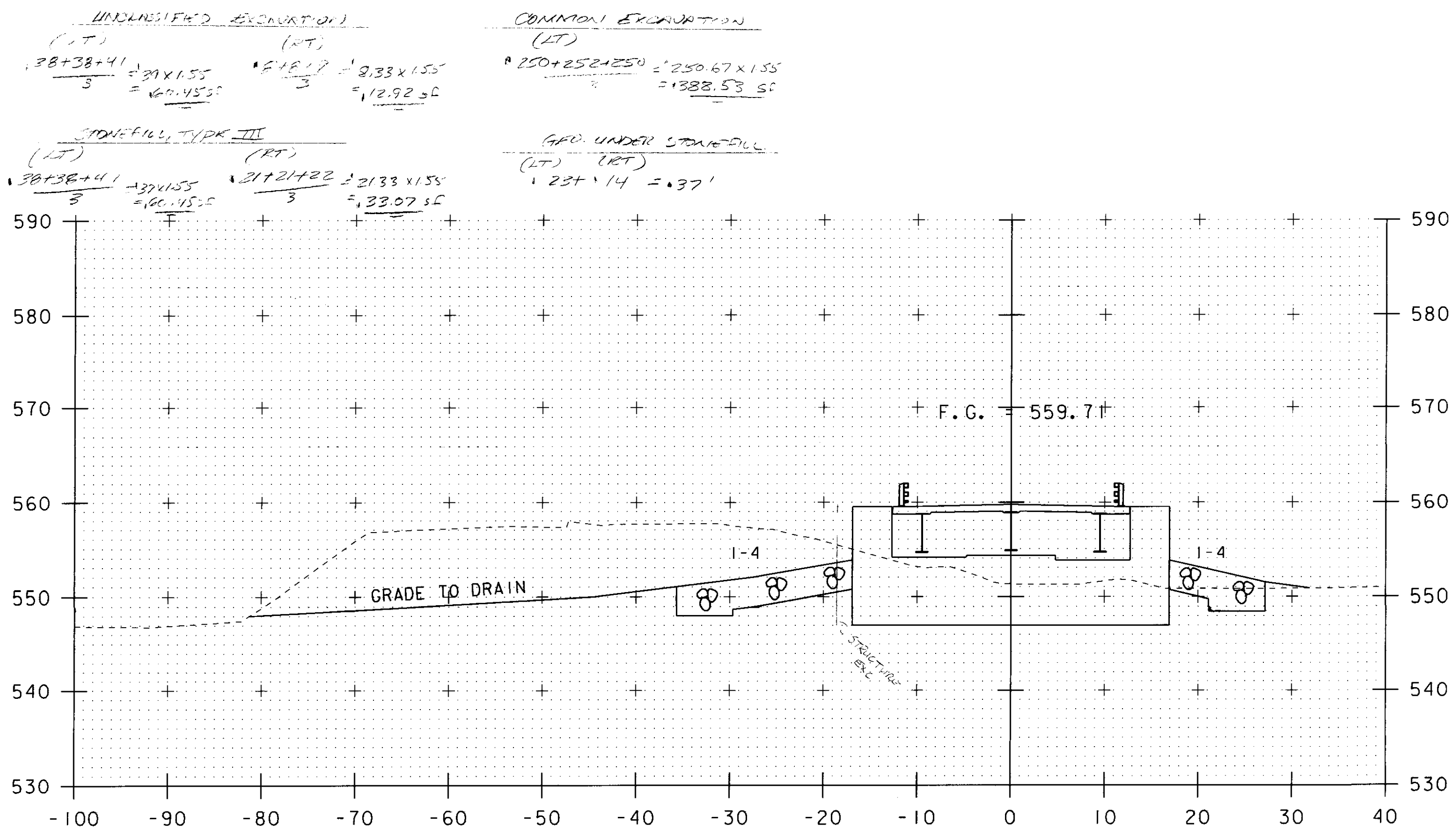
STA. 33+50 TO STA. 34+25

SCALE 1" = 10'-0"
10 0 10

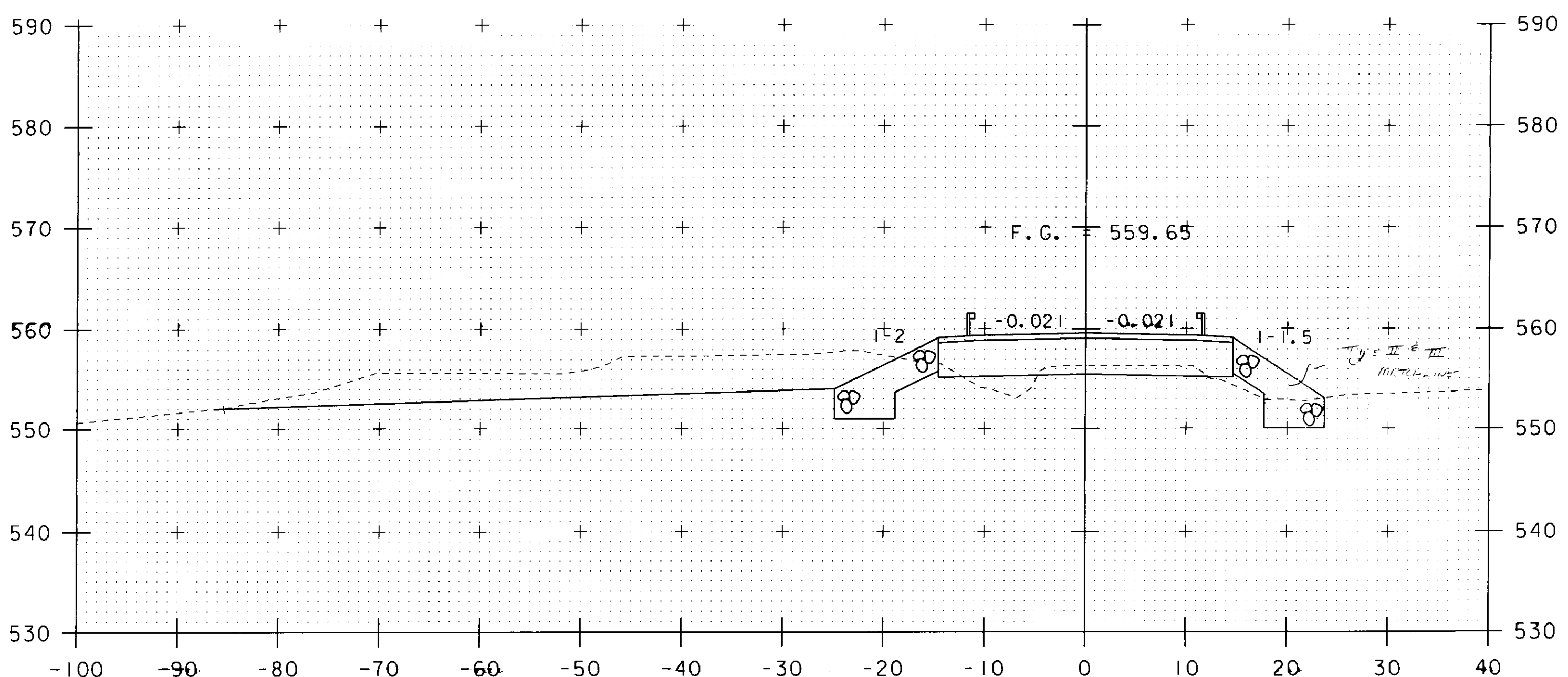
PROJECT NAME: JAMAICA
PROJECT NUMBER: BRO 1442(27)

FILE NAME: s96J068xsl.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. LACROIX
ROADWAY CROSS SECTIONS #2

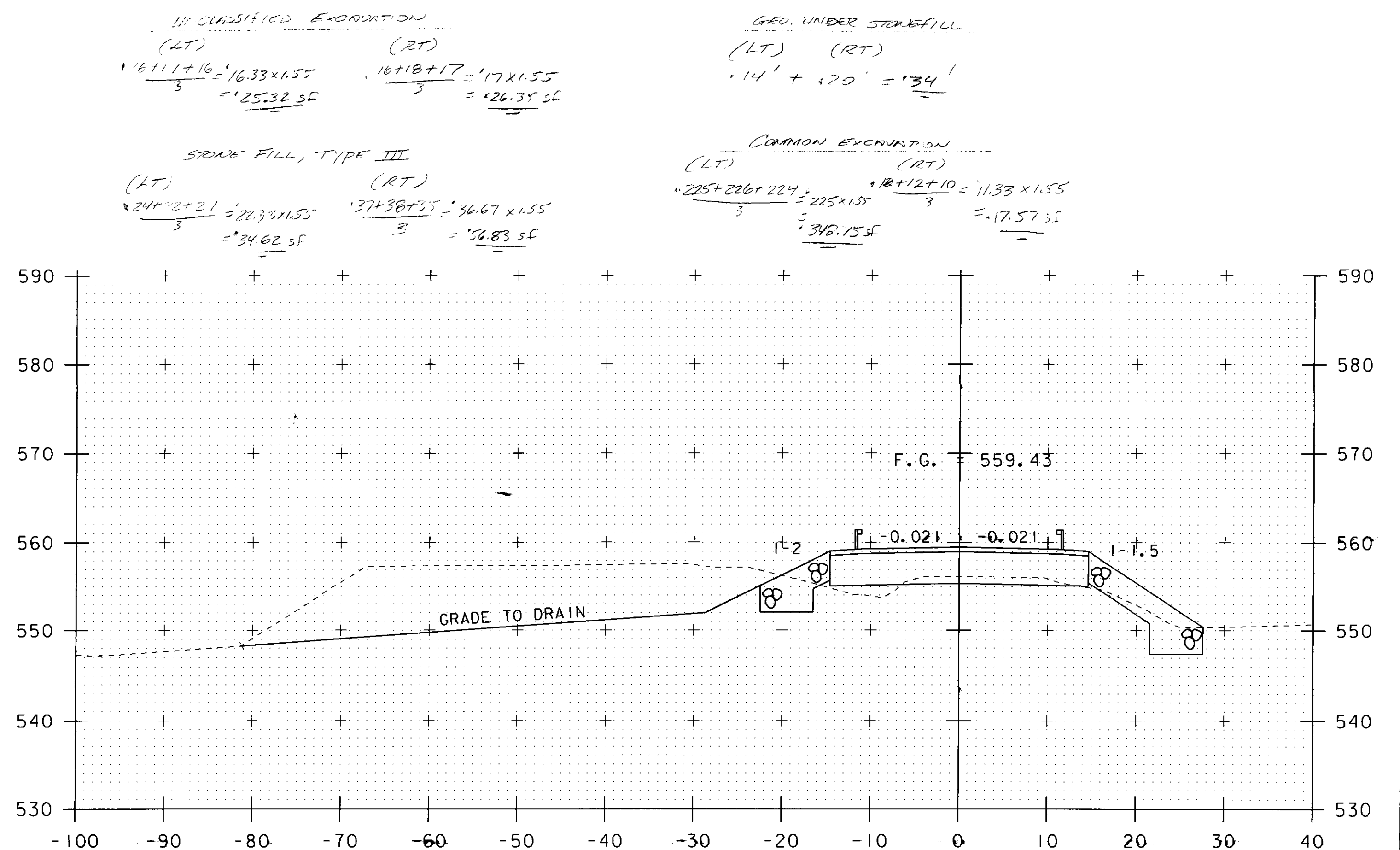
PLOT DATE: 23-SEP-2010
DRAWN BY: R. PELLETT
CHECKED BY: J. LACROIX
SHEET 35 OF 45



36+10.50



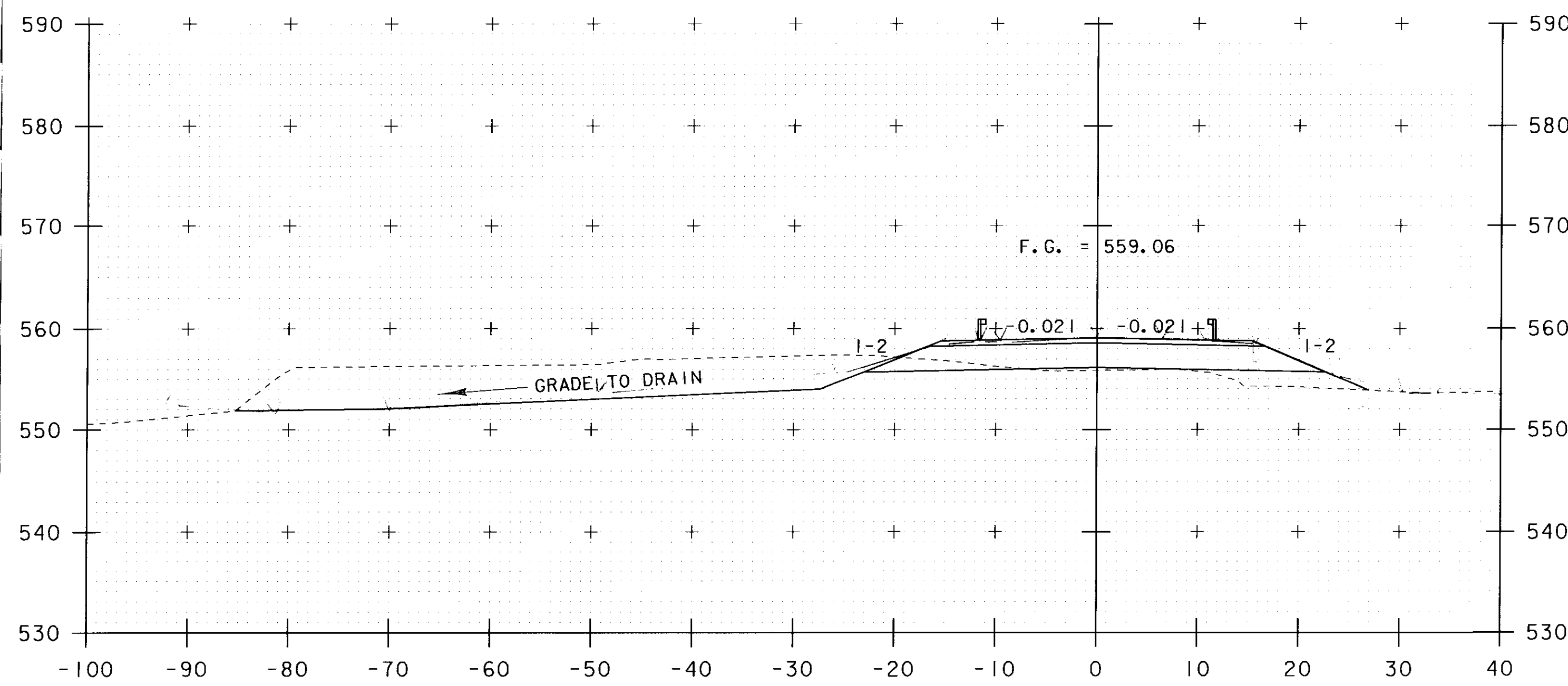
34+93



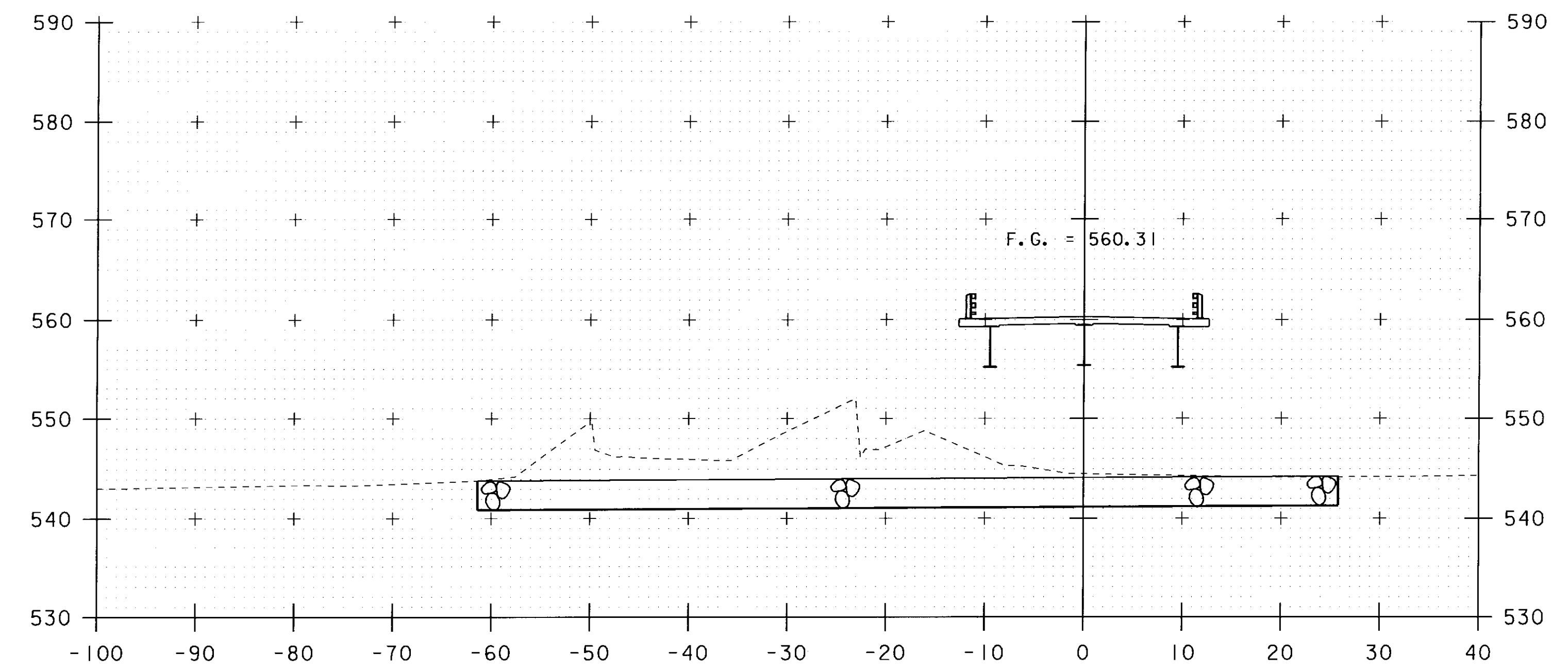
36+20

SCALE 1" = 10'-0"
 0 10
 STA. 34+93 TO STA. 36+20

PROJECT NAME: JAMAICA
 PROJECT NUMBER: BRO 1442(27)
 FILE NAME: s96j068xsl.dgn
 PROJECT LEADER: K. HIGGINS
 DESIGNED BY: J. LACROIX
 ADDITIONAL SECTIONS
 PLOT DATE: 04-JAN-2011
 DRAWN BY: J. SALVATORI
 CHECKED BY: J. SALVATORI
 SHEET 1 OF 1

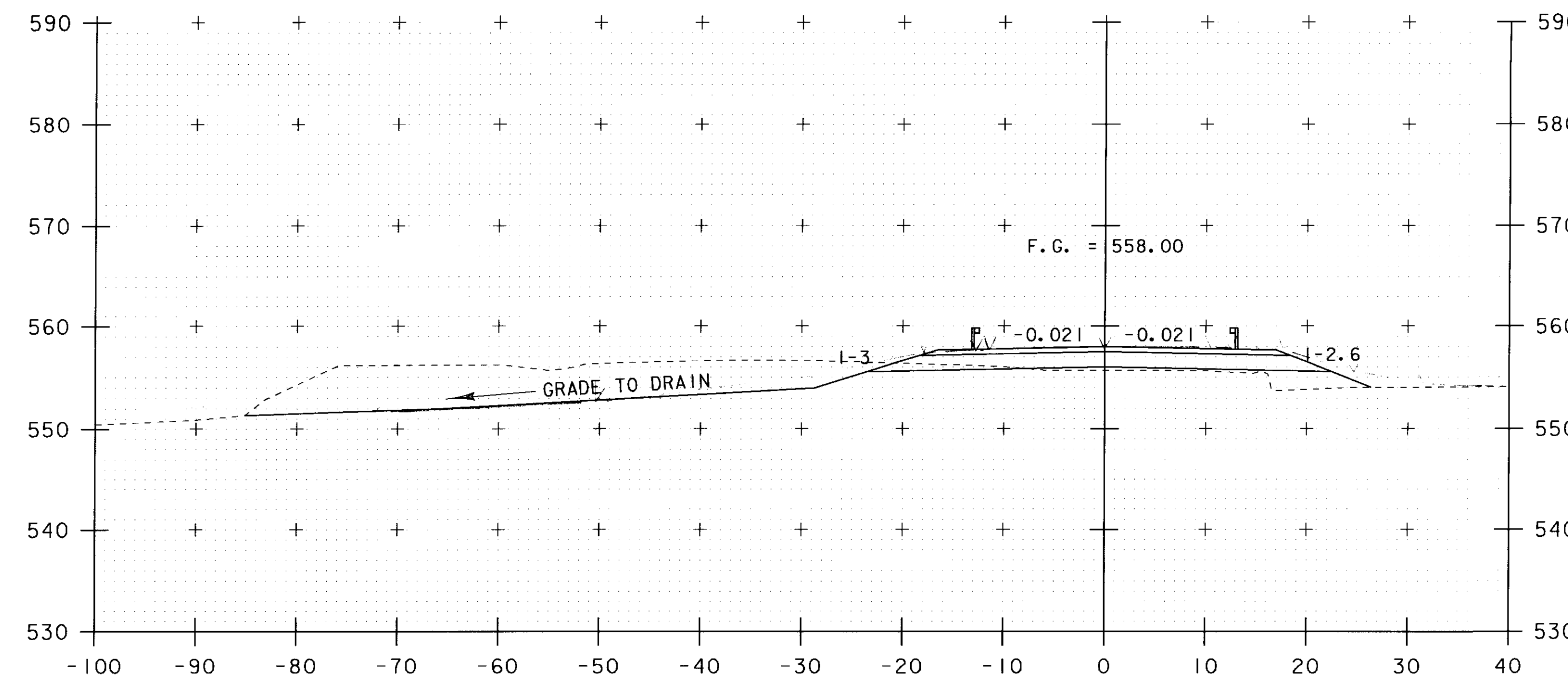


34+75

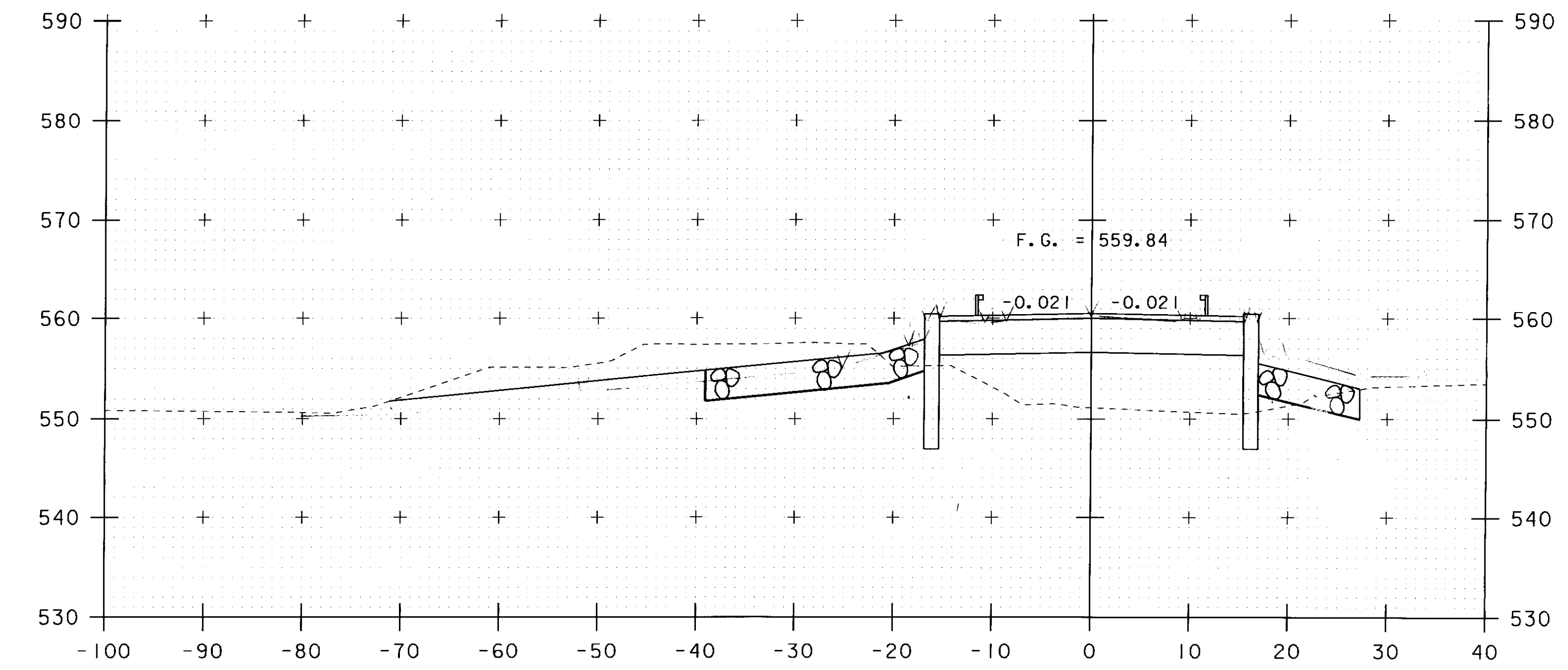


35+25

BEGIN BRIDGE 35+02.50

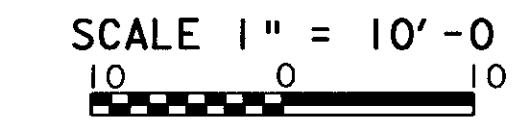


34+50



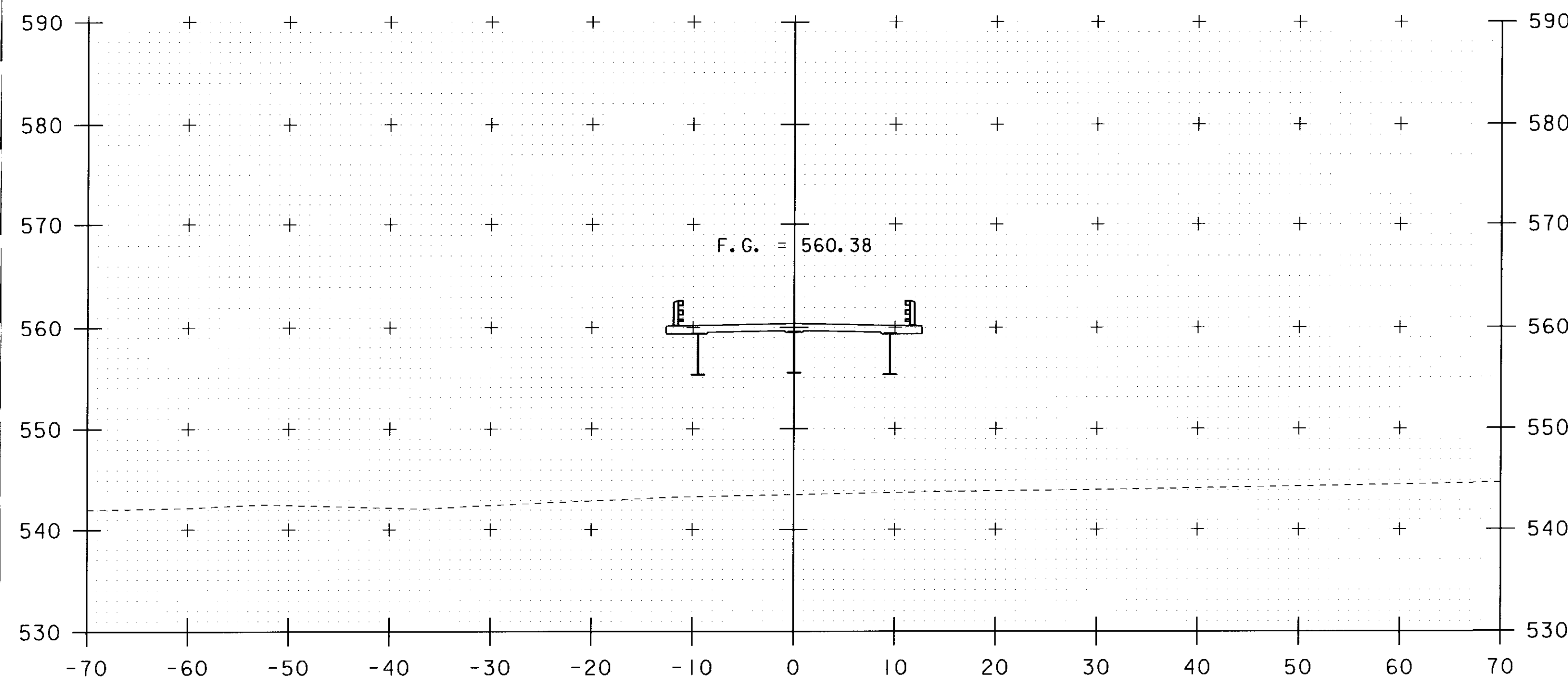
35+00

STA. 34+50 TO STA. 35+25

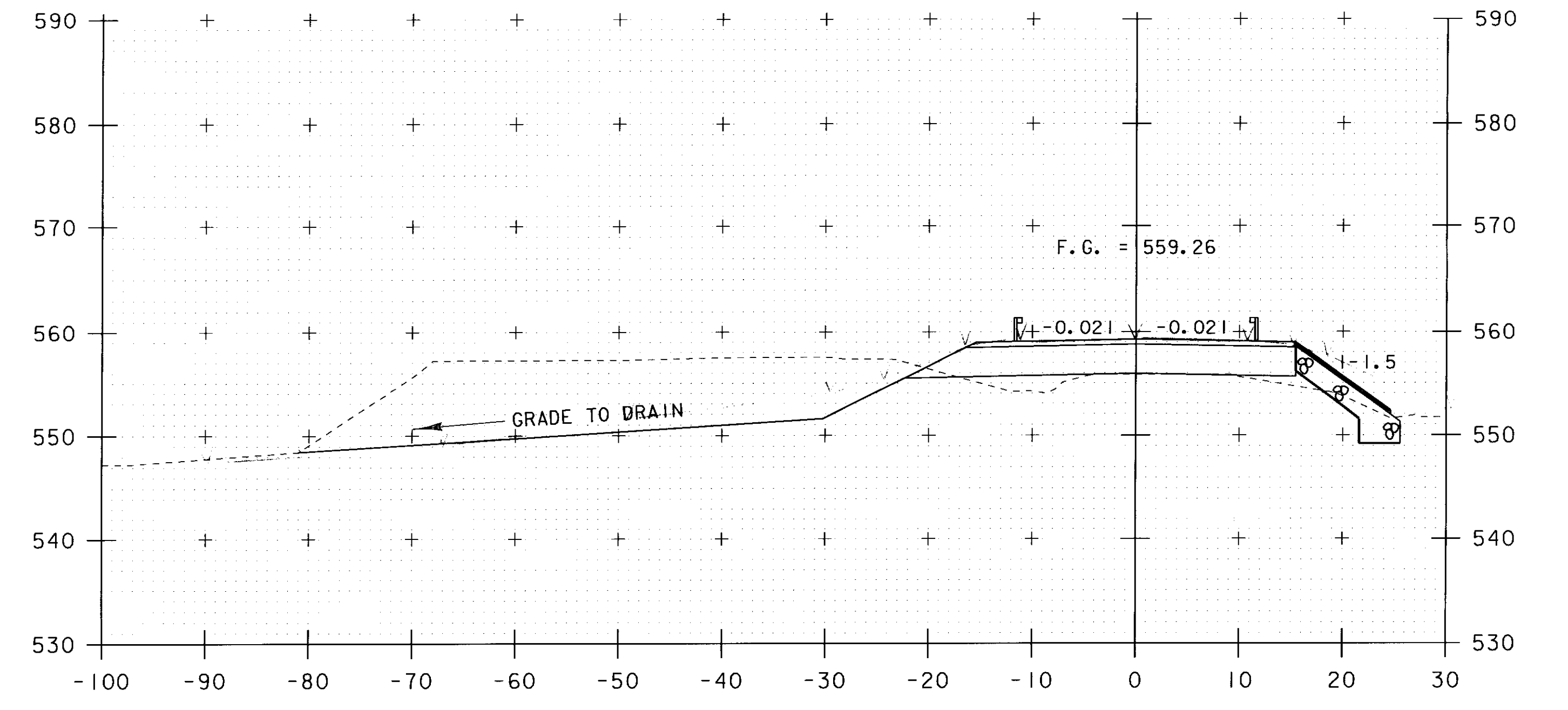


Common Excavation:
 (1) 34+60 = 18' x 36' x 15' 189.06 f
 (2) 0
 (3) 0

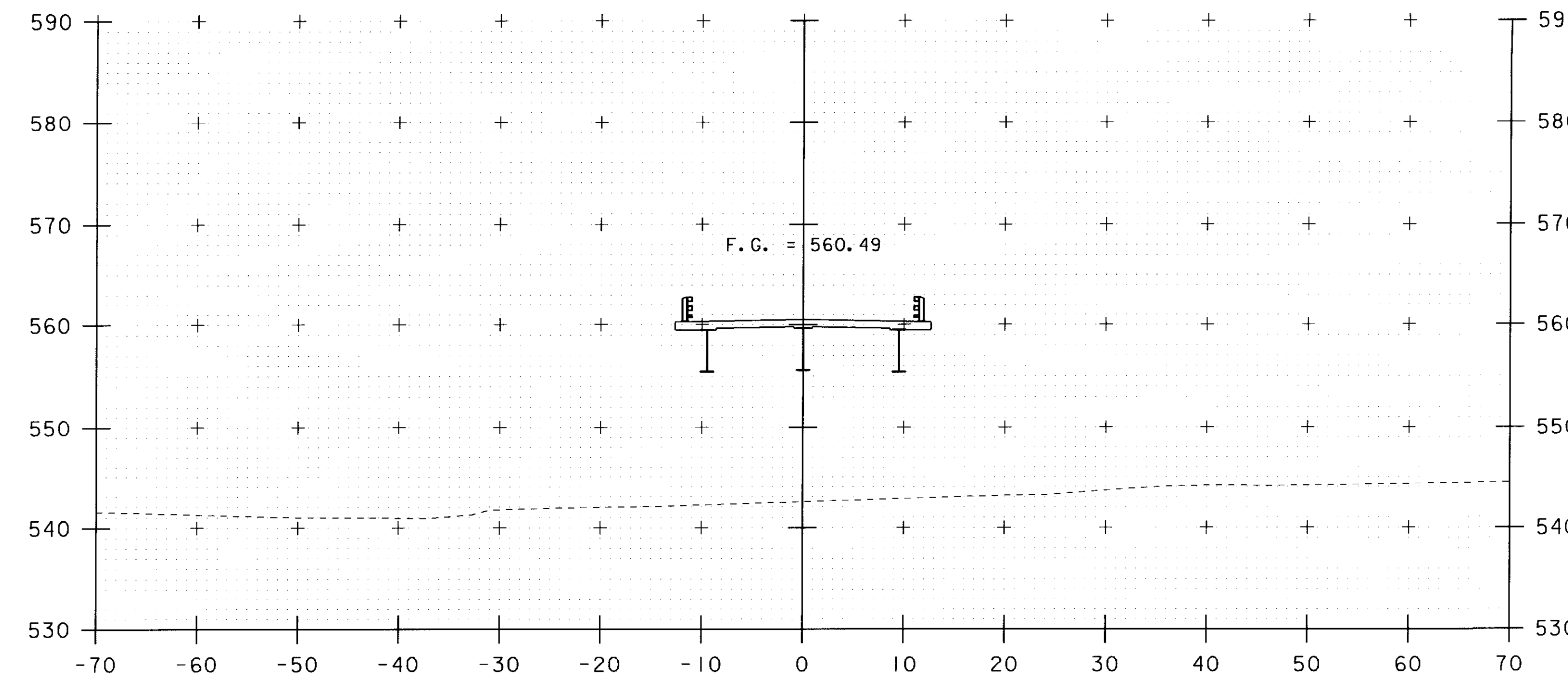
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|-----------------|----------------|---------------------------|----------------|
| PROJECT NAME: | JAMAICA | PLOT DATE: | 23-SEP-2010 |
| PROJECT NUMBER: | BRO 1442(27) | DRAWN BY: | R. PELLETT |
| FILE NAME: | s96J068xsl.dgn | CHECKED BY: | J. LACROIX |
| PROJECT LEADER: | K. HIGGINS | ROADWAY CROSS SECTIONS #3 | SHEET 36 OF 45 |
| DESIGNED BY: | J. LACROIX | | |



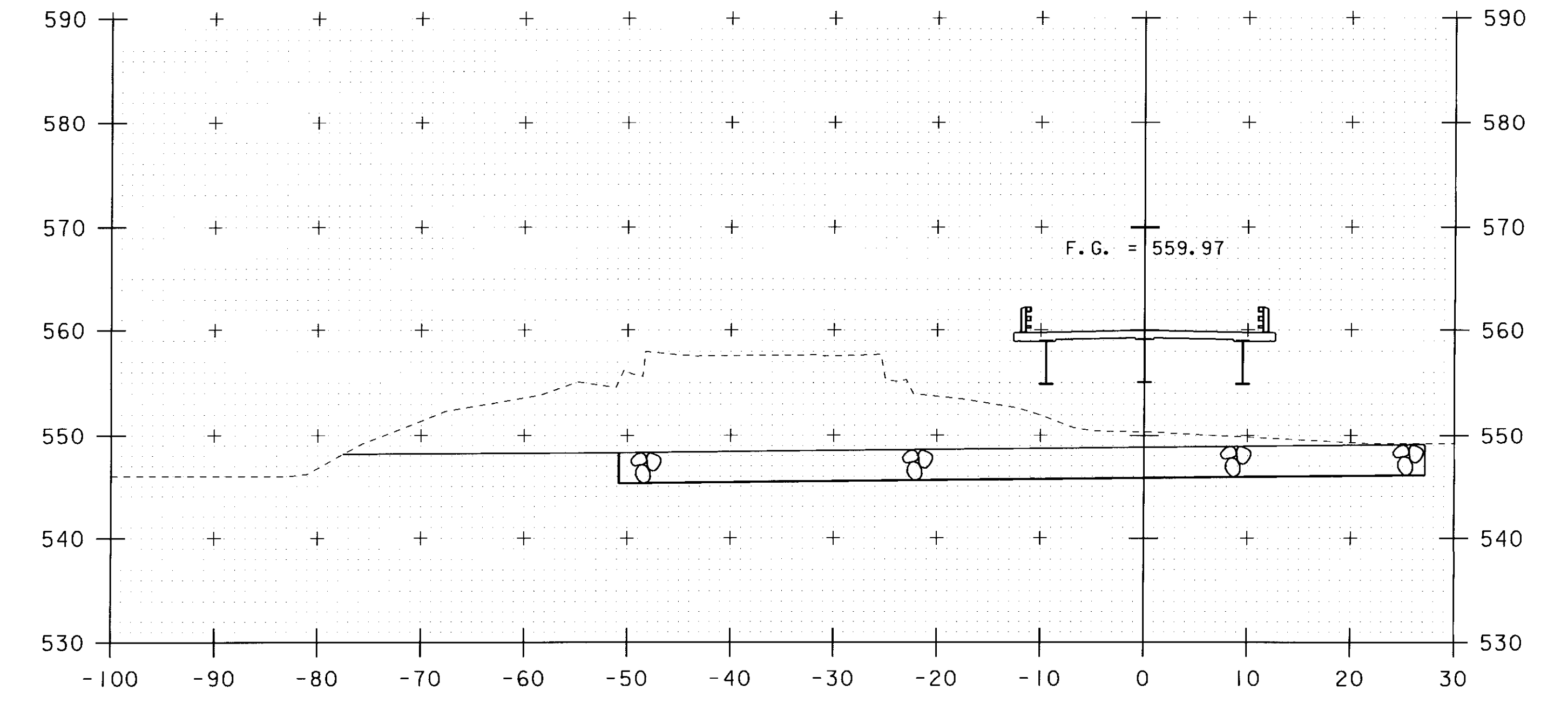
35+75



36+25 STA. 36+19.89 RT.
 BEGIN SLOPE STABILIZATION
 WITH 2' STONE FILL, TYPE II
 WITH 12" GRUBBING MATERIAL



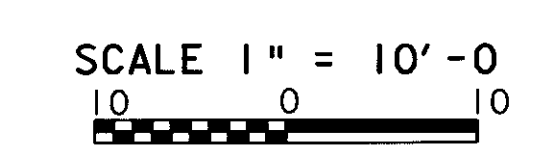
35+50



END BRIDGE 36+10.50

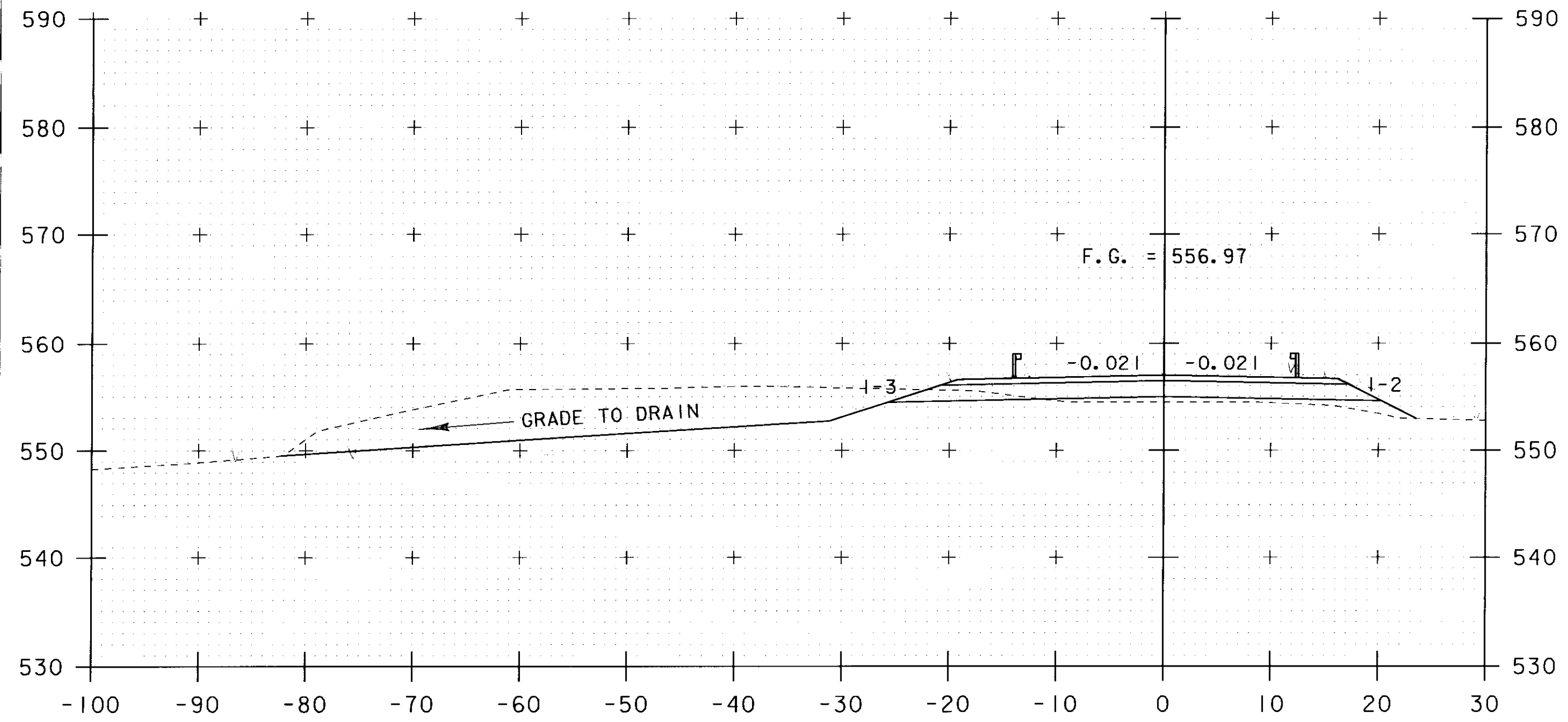
36+00

STA. 35+50 TO STA. 36+25

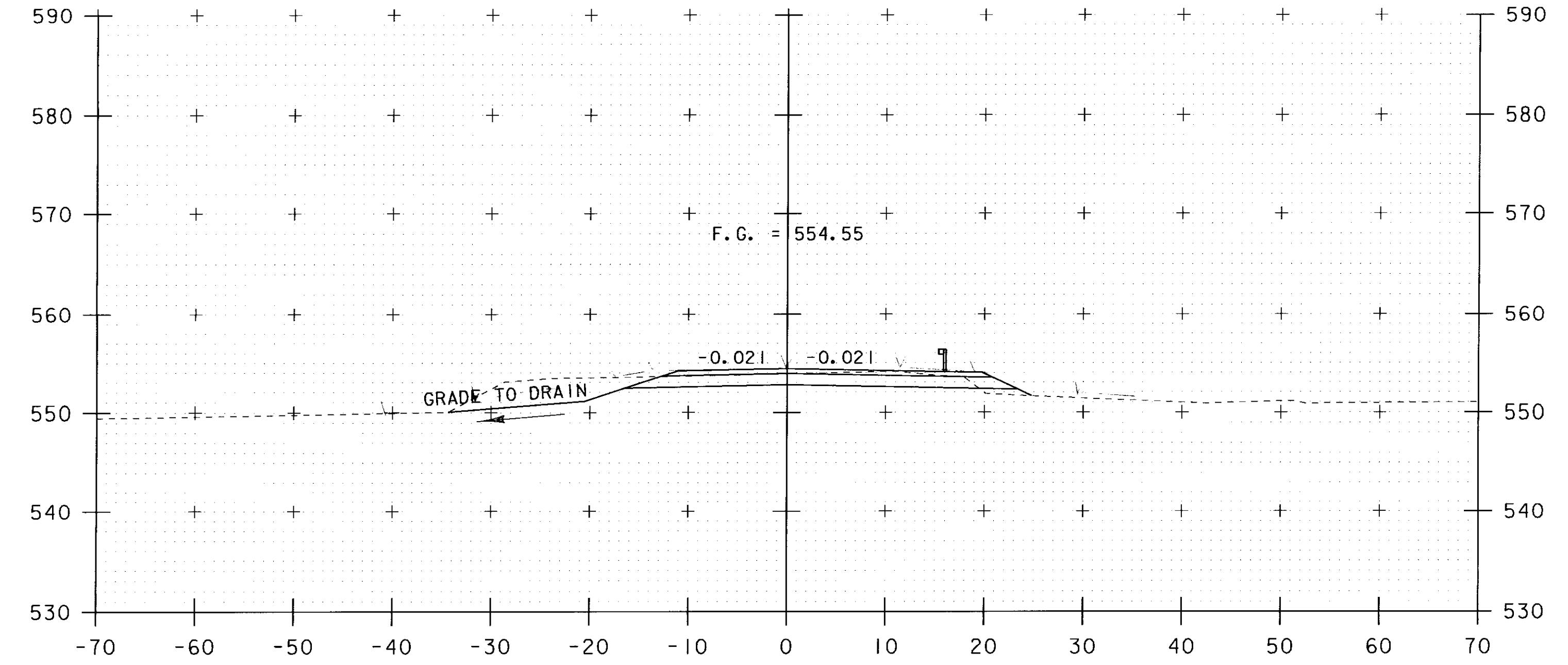


| | |
|------------------------------|------------------------|
| PROJECT NAME: JAMAICA | PLOT DATE: 23-SEP-2010 |
| PROJECT NUMBER: BRO 1442(27) | DRAWN BY: R. PELLETT |
| FILE NAME: s96j068xsl.dgn | CHECKED BY: J. LACROIX |
| PROJECT LEADER: K. HIGGINS | SHEET 37 OF 45 |
| DESIGNED BY: J. LACROIX | |
| ROADWAY CROSS SECTIONS #4 | |

*M72
12/1/10*

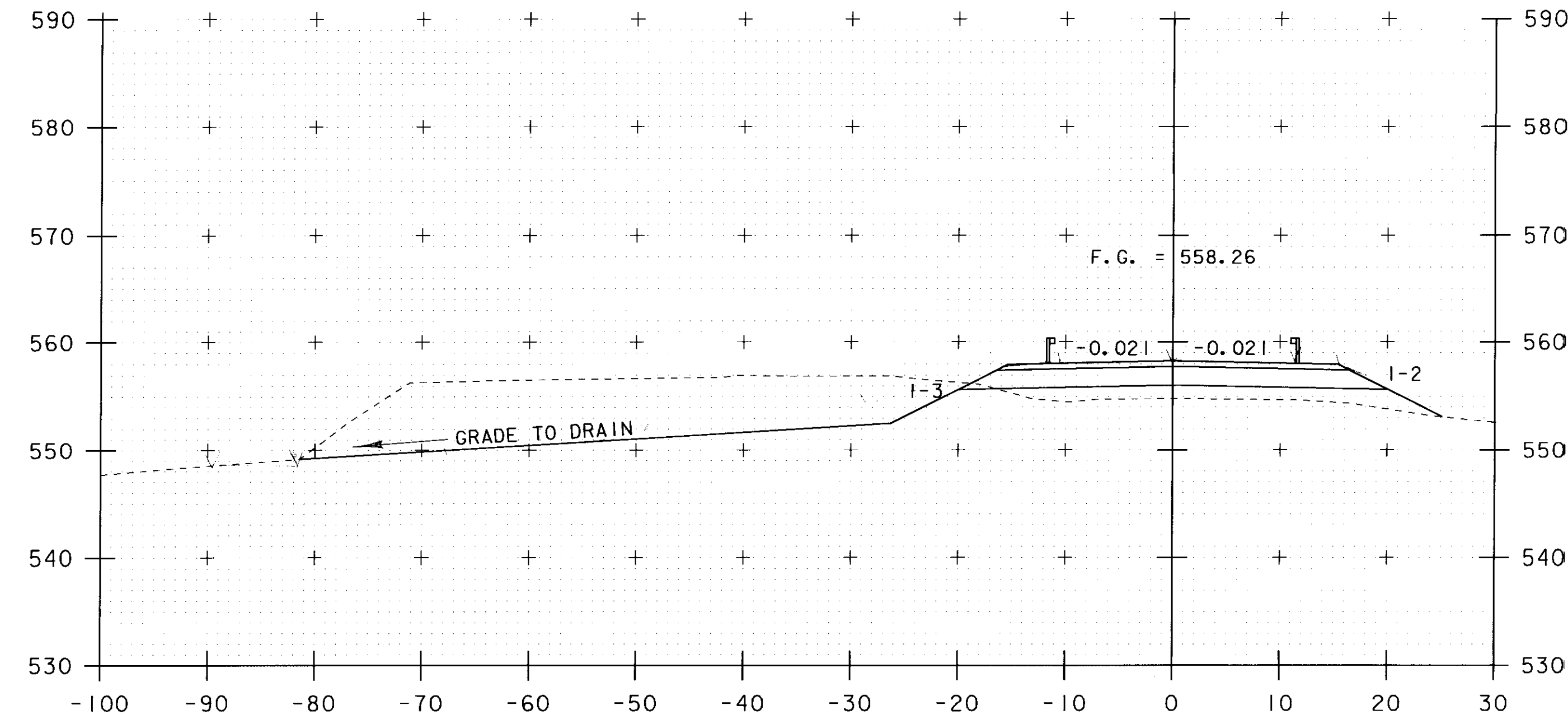


36+75

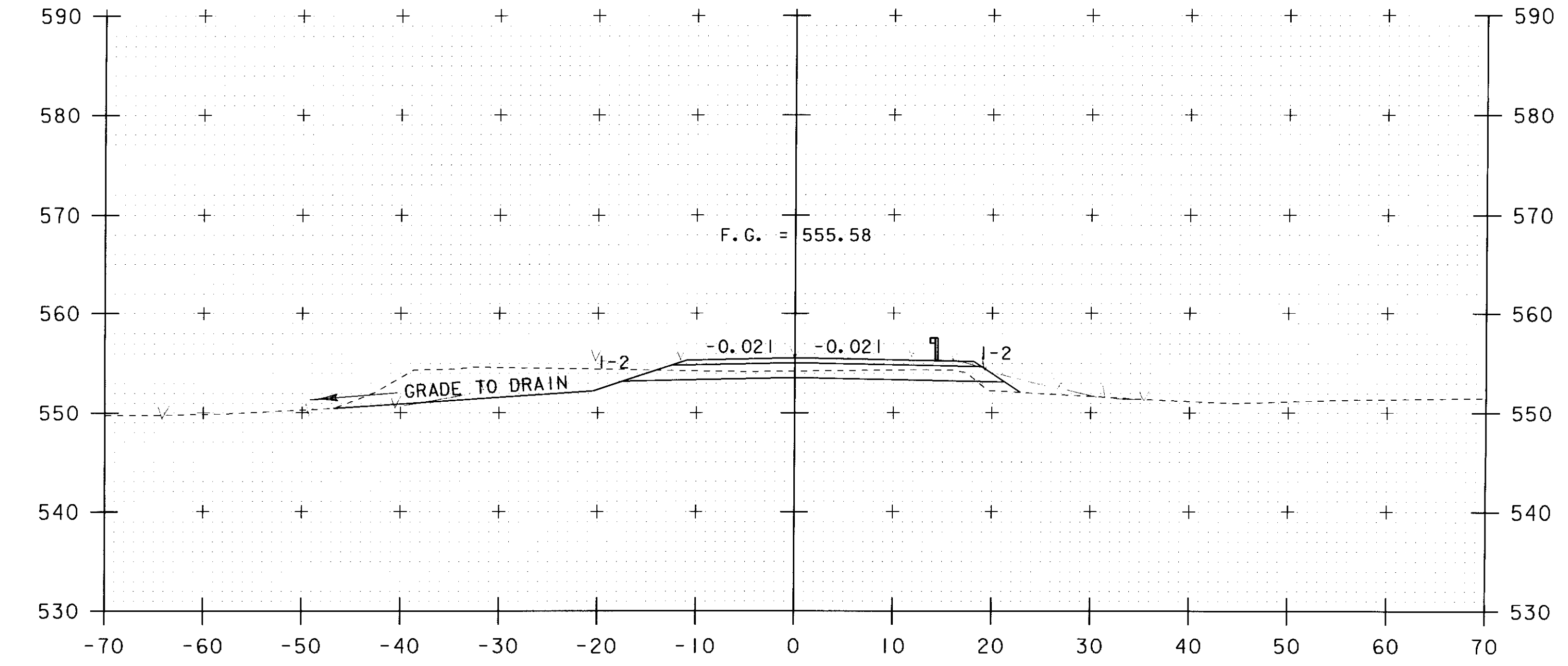


37+25

STA. 36+50 RT.
END SLOPE STABILIZATION
WITH 2' STONE FILL, TYPE II
WITH 12" GRUBBING MATERIAL

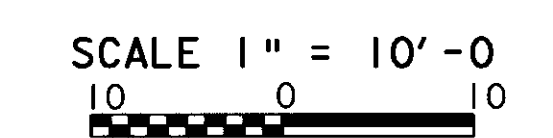


36+50

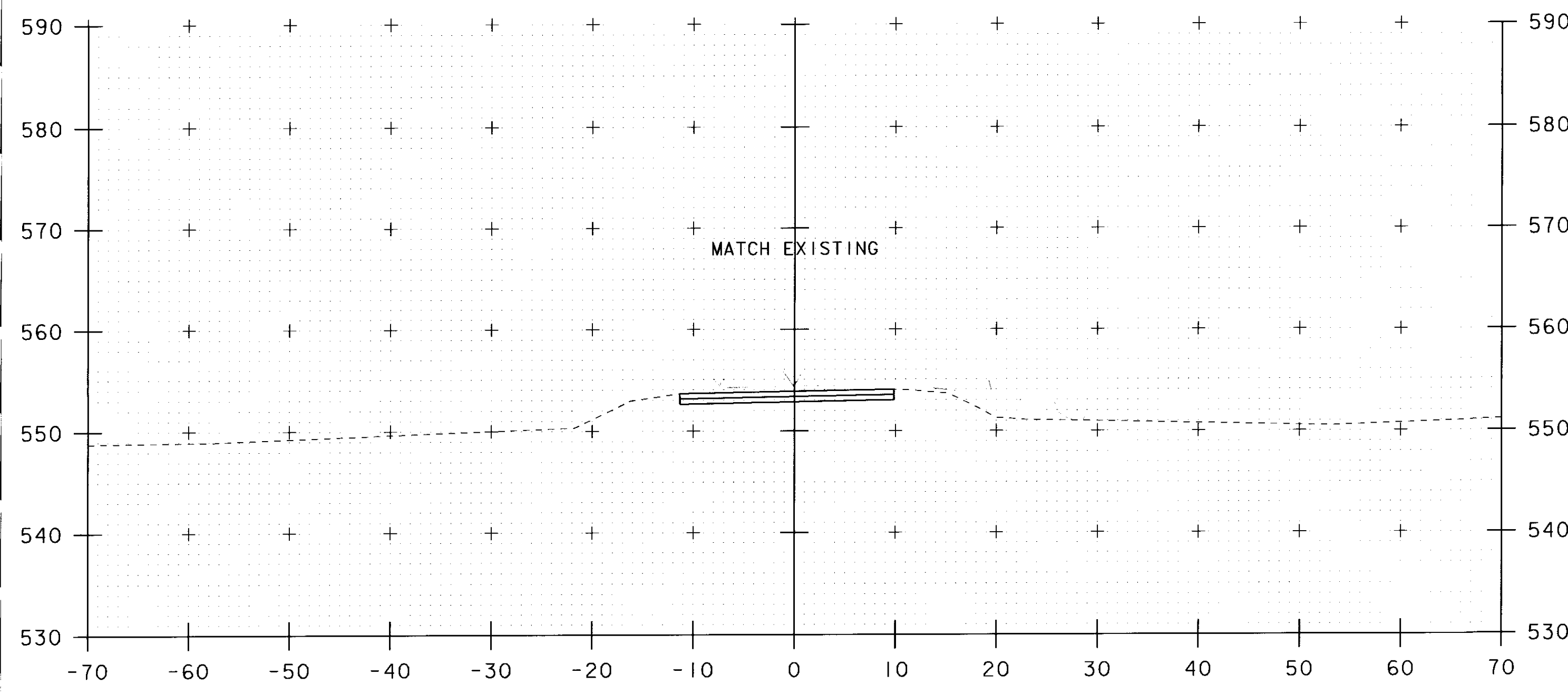


37+00
END PROJECT

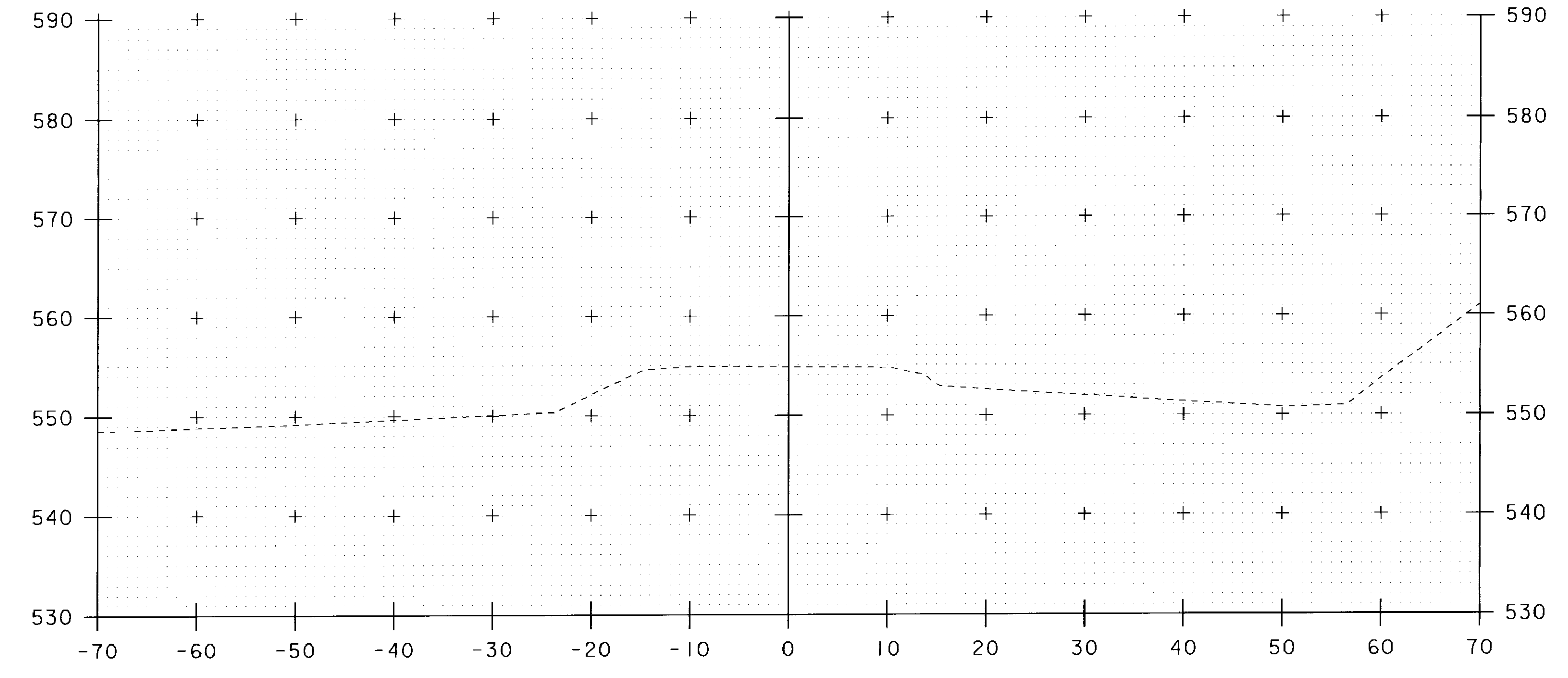
STA. 36+50 TO STA. 37+25



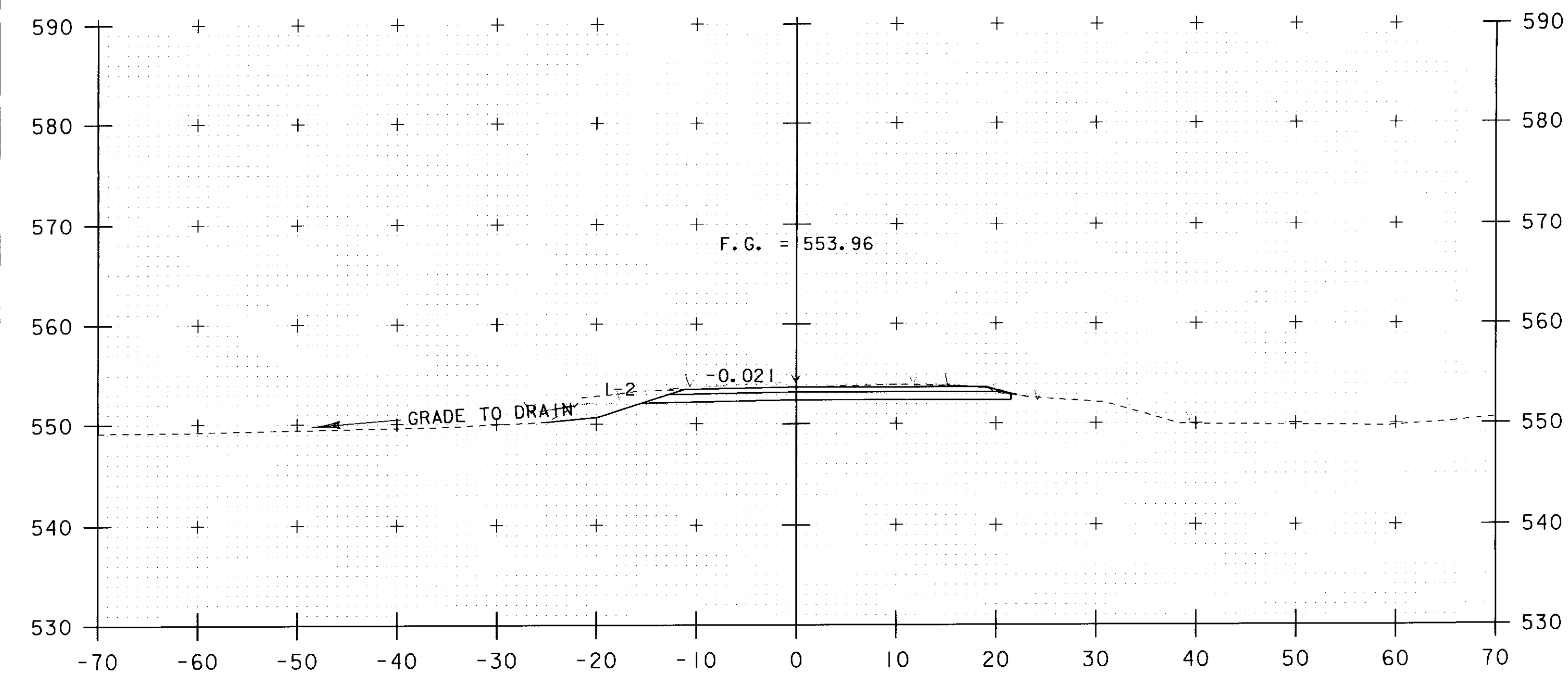
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|-----------------|----------------|---------------------------|----------------|
| PROJECT NAME: | JAMAICA | PLOT DATE: | 23-SEP-2010 |
| PROJECT NUMBER: | BRO 1442(27) | DRAWN BY: | R. PELLETT |
| FILE NAME: | s96j068xsl.dgn | CHECKED BY: | J. LACROIX |
| PROJECT LEADER: | K. HIGGINS | ROADWAY CROSS SECTIONS #5 | SHEET 38 OF 45 |
| DESIGNED BY: | J. LACROIX | | |



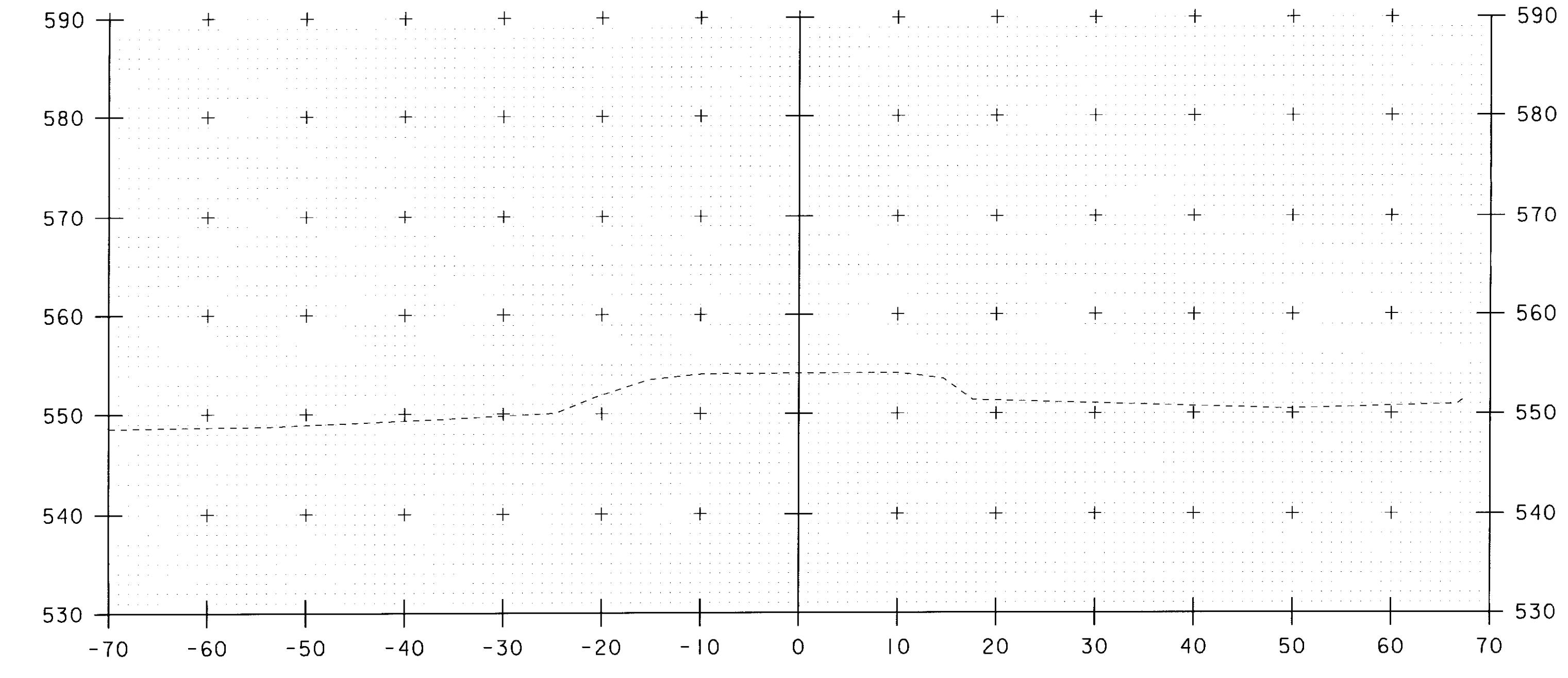
37+75
END APPROACH



38+25

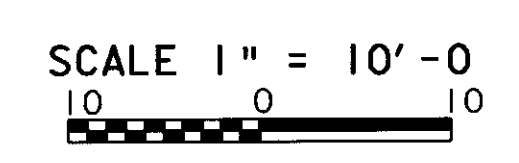


37+50

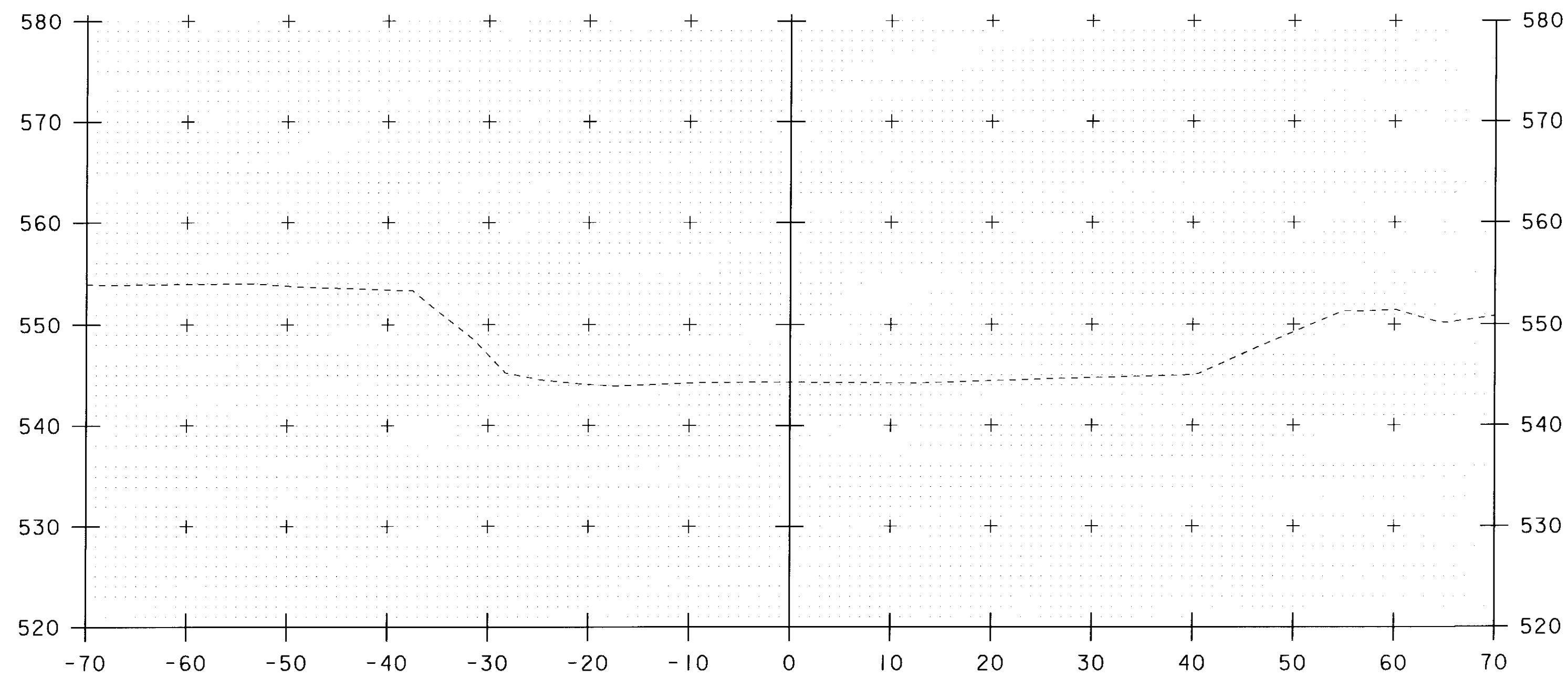


38+00

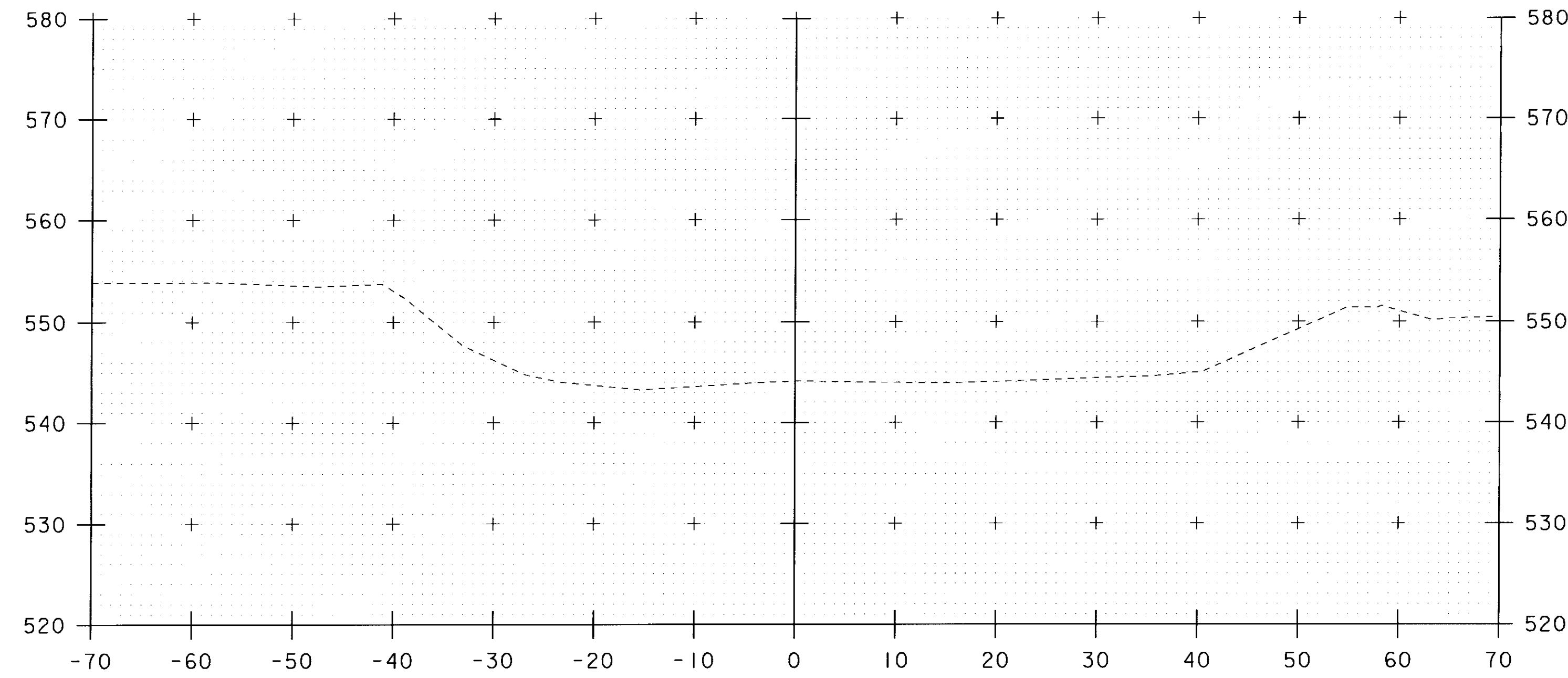
STA. 37+50 TO STA. 38+25



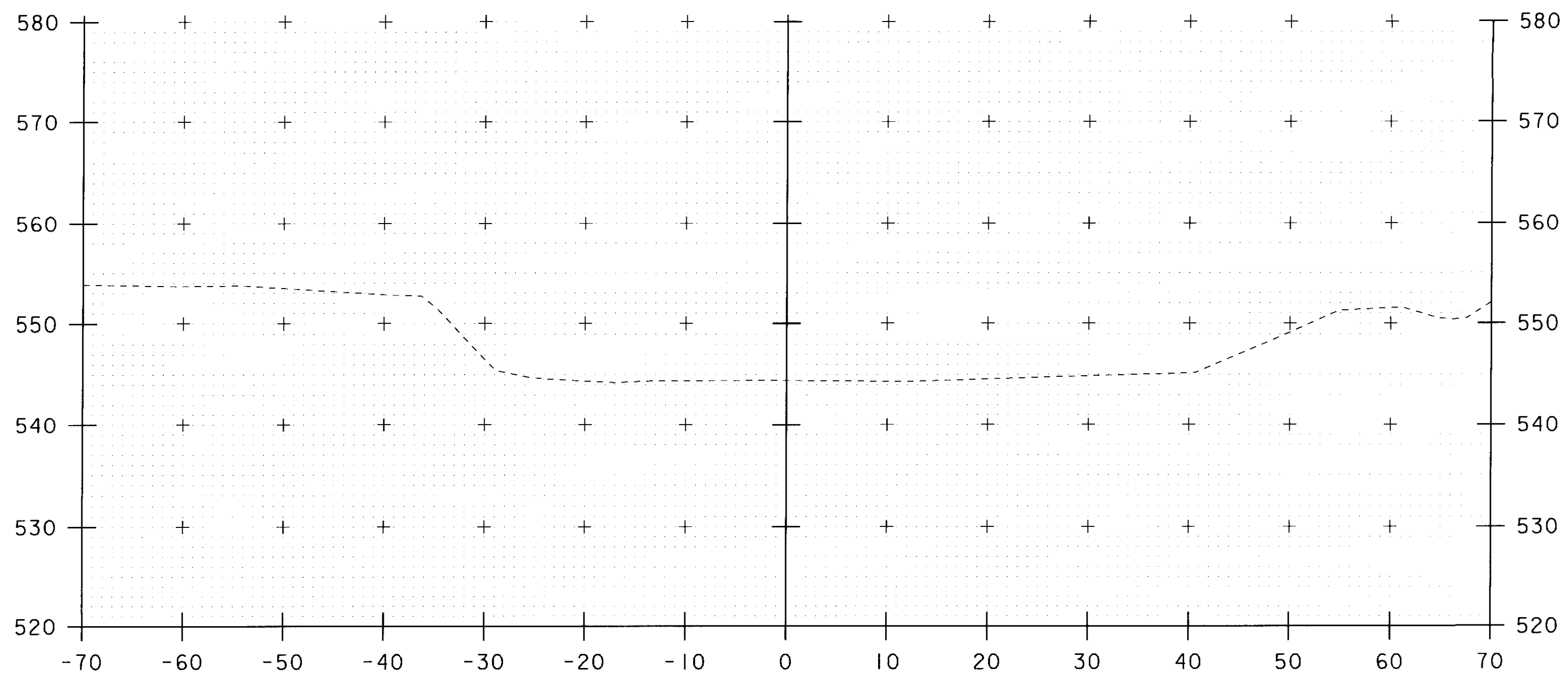
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|------------------------------|---------------------------|
| PROJECT NAME: JAMAICA | PLOT DATE: 23-SEP-2010 |
| PROJECT NUMBER: BRO 1442(27) | DRAWN BY: R. PELLETT |
| FILE NAME: s96j068xsl.dgn | CHECKED BY: J. LACROIX |
| PROJECT LEADER: K. HIGGINS | ROADWAY CROSS SECTIONS #6 |
| DESIGNED BY: J. LACROIX | SHEET 39 OF 45 |



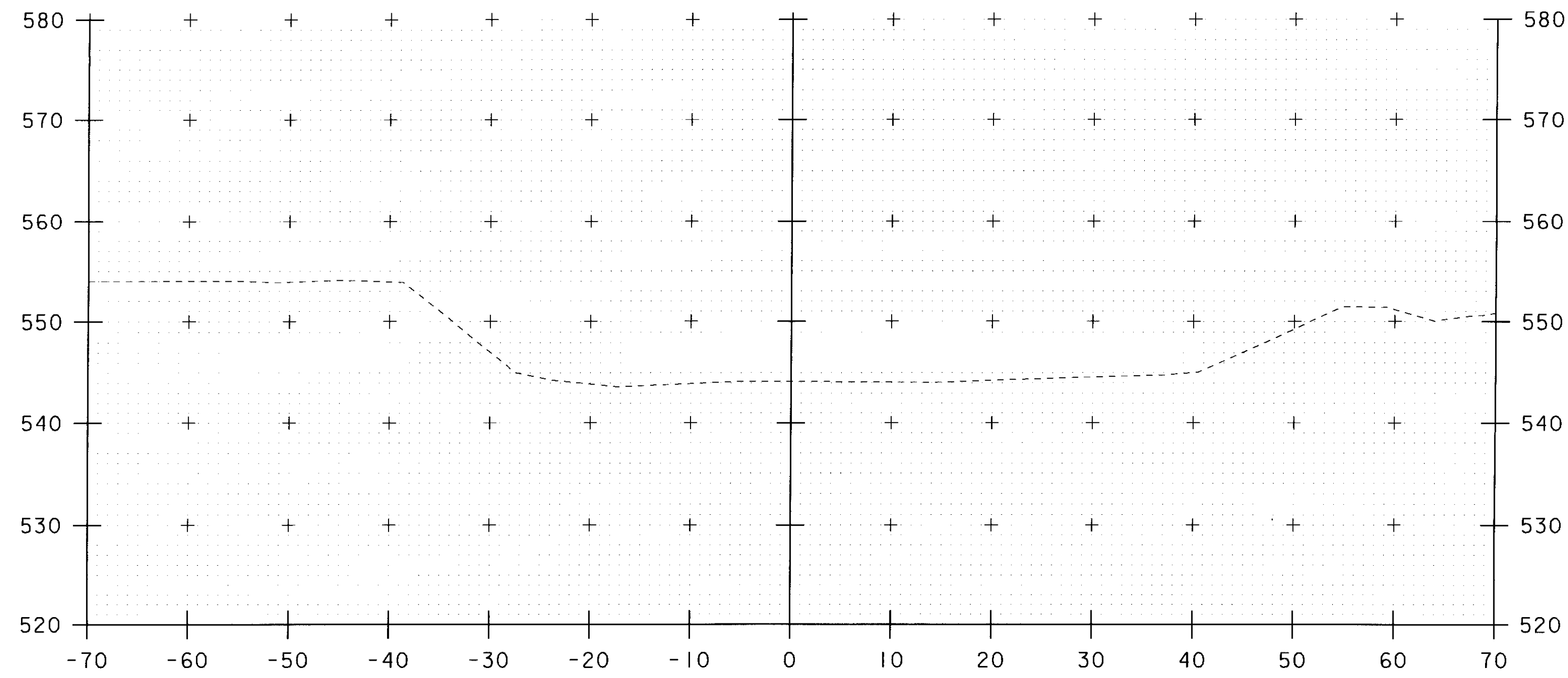
3+40



3+60



3+30



3+50

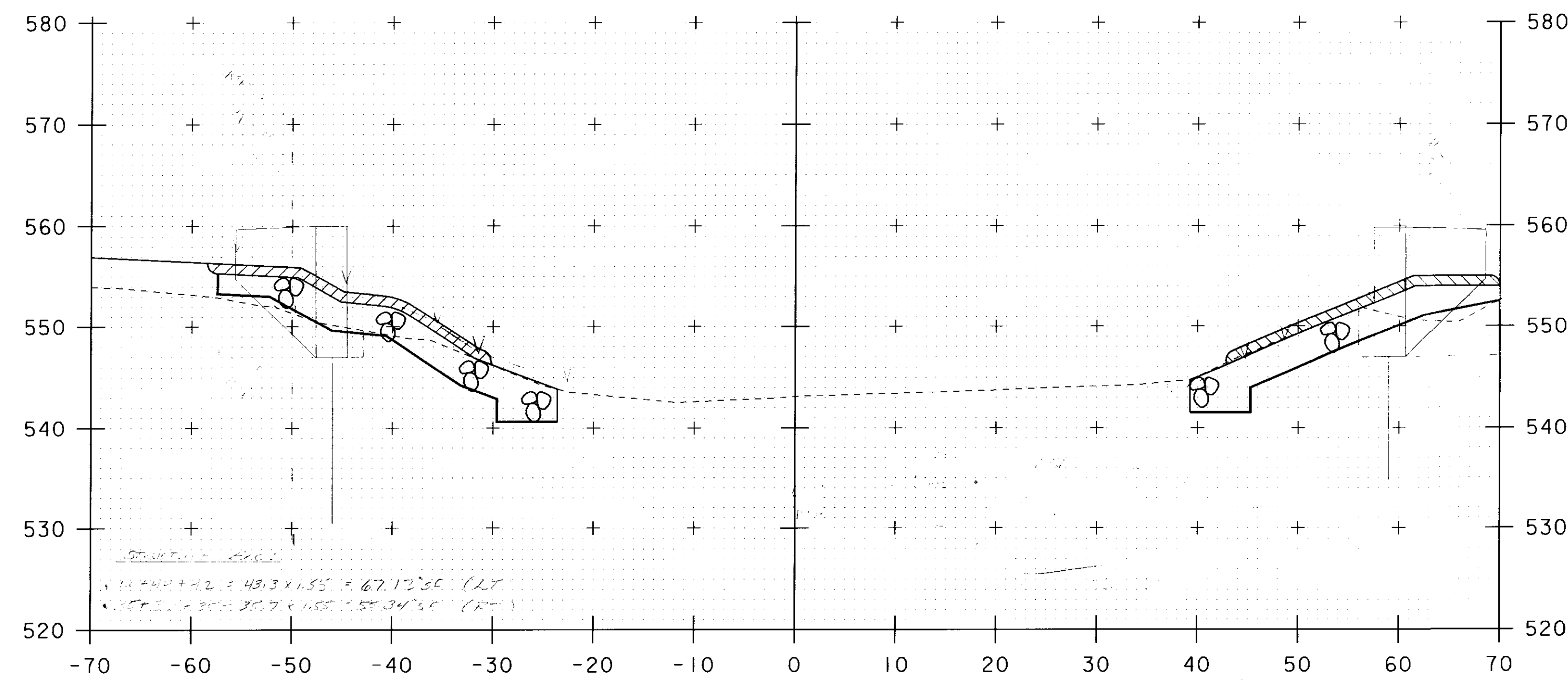
STA. 3+30 TO STA. 3+60

SCALE 1" = 10'-0"


PROJECT NAME: JAMAICA
 PROJECT NUMBER: BRO 1442(27)

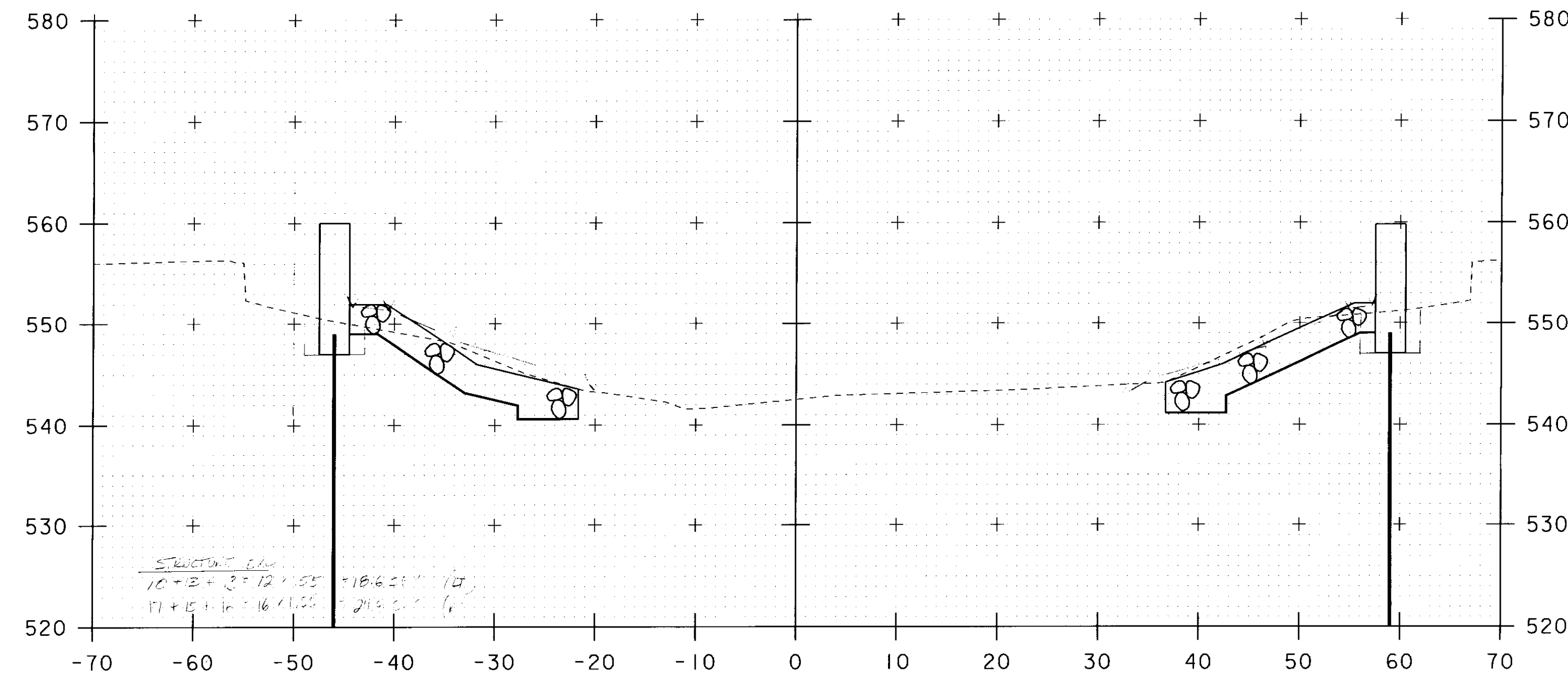
FILE NAME: s96j068xsl.dgn
 PROJECT LEADER: K. HIGGINS
 DESIGNED BY: J. LACROIX
 CHANNEL CROSS SECTIONS #1

PLOT DATE: 23-SEP-2010
 DRAWN BY: R. PELLETT
 CHECKED BY: J. LACROIX
 SHEET 40 OF 45

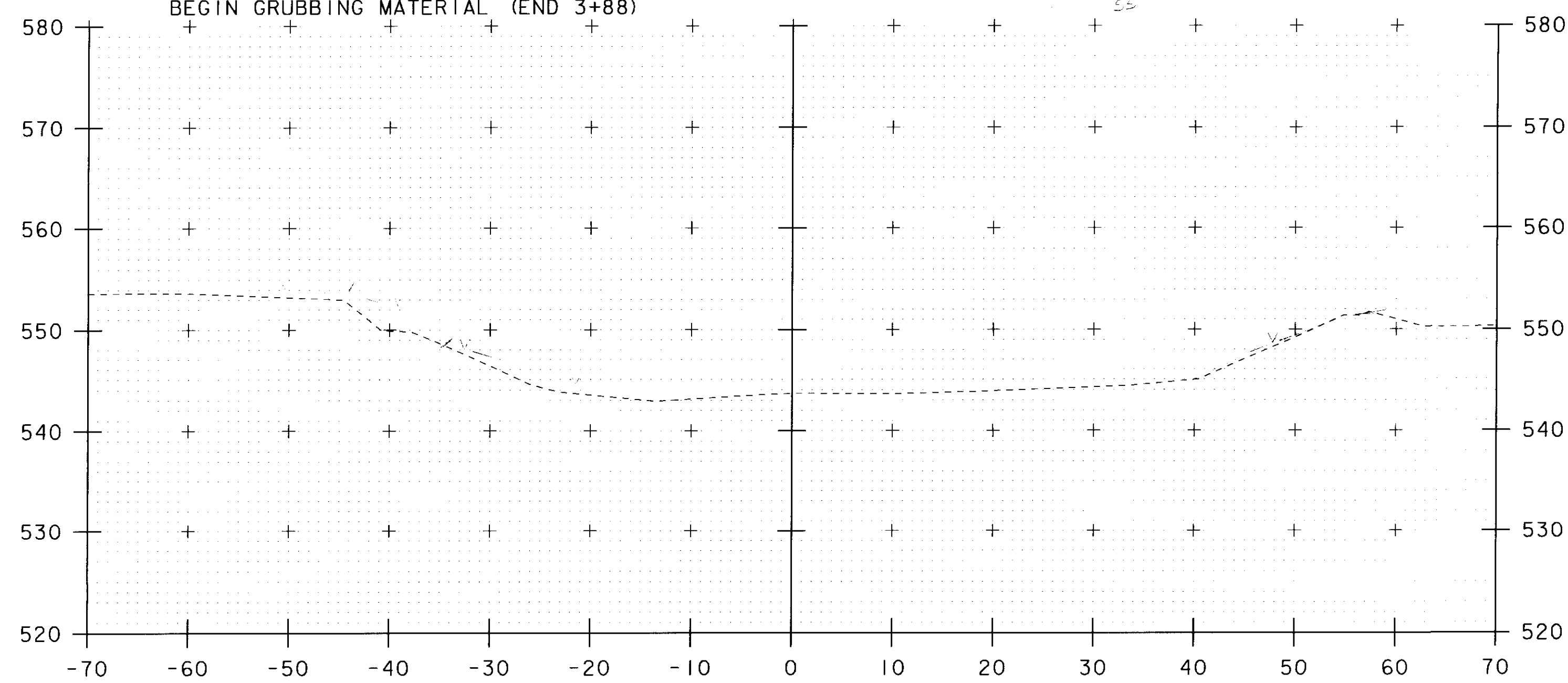


STA 3+72.50 LT & RT
 BEGIN UNCLASSIFIED CHANNEL EXCAVATION
 BEGIN GEOTEXTILE UNDER STONE FILL
 BEGIN STONE FILL TYPE III
 BEGIN GRUBBING MATERIAL (END 3+88)

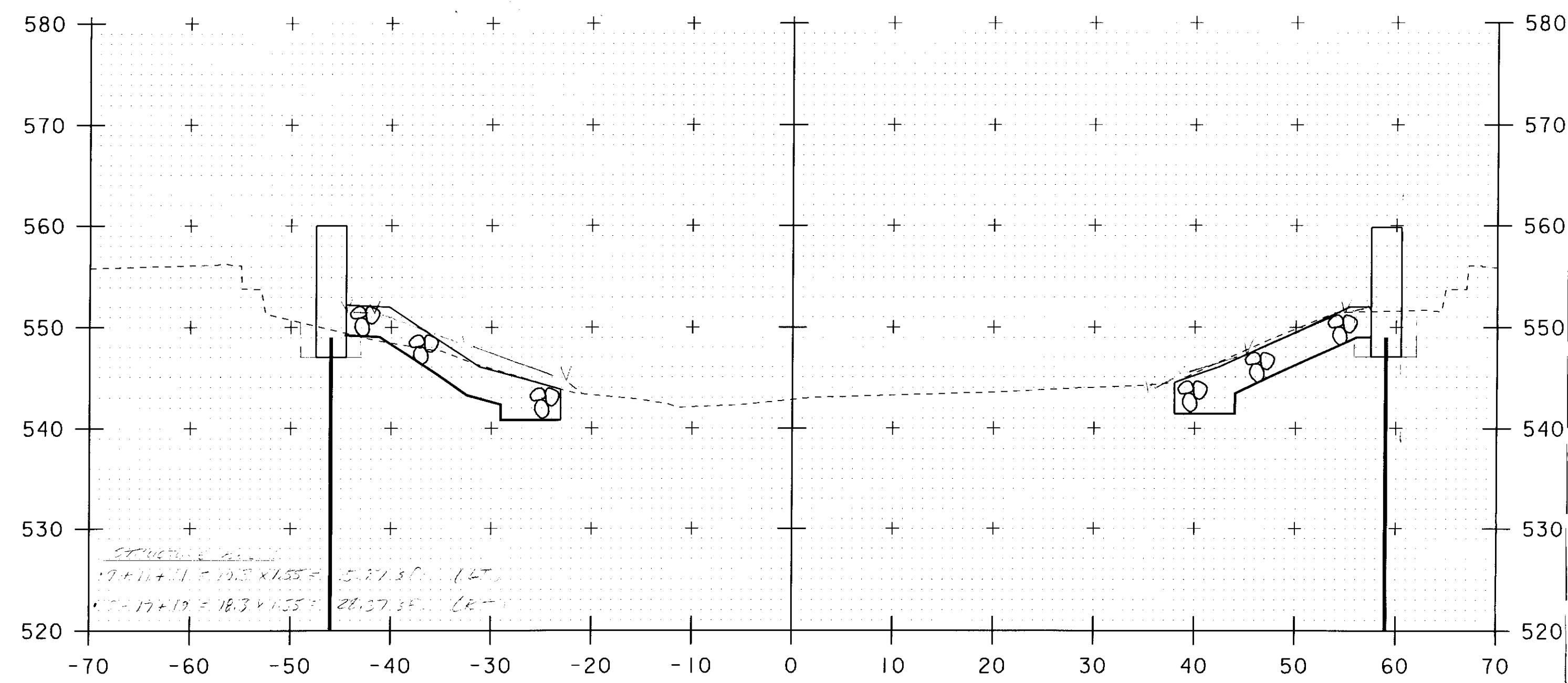
3+80



4+00



3+70



3+90

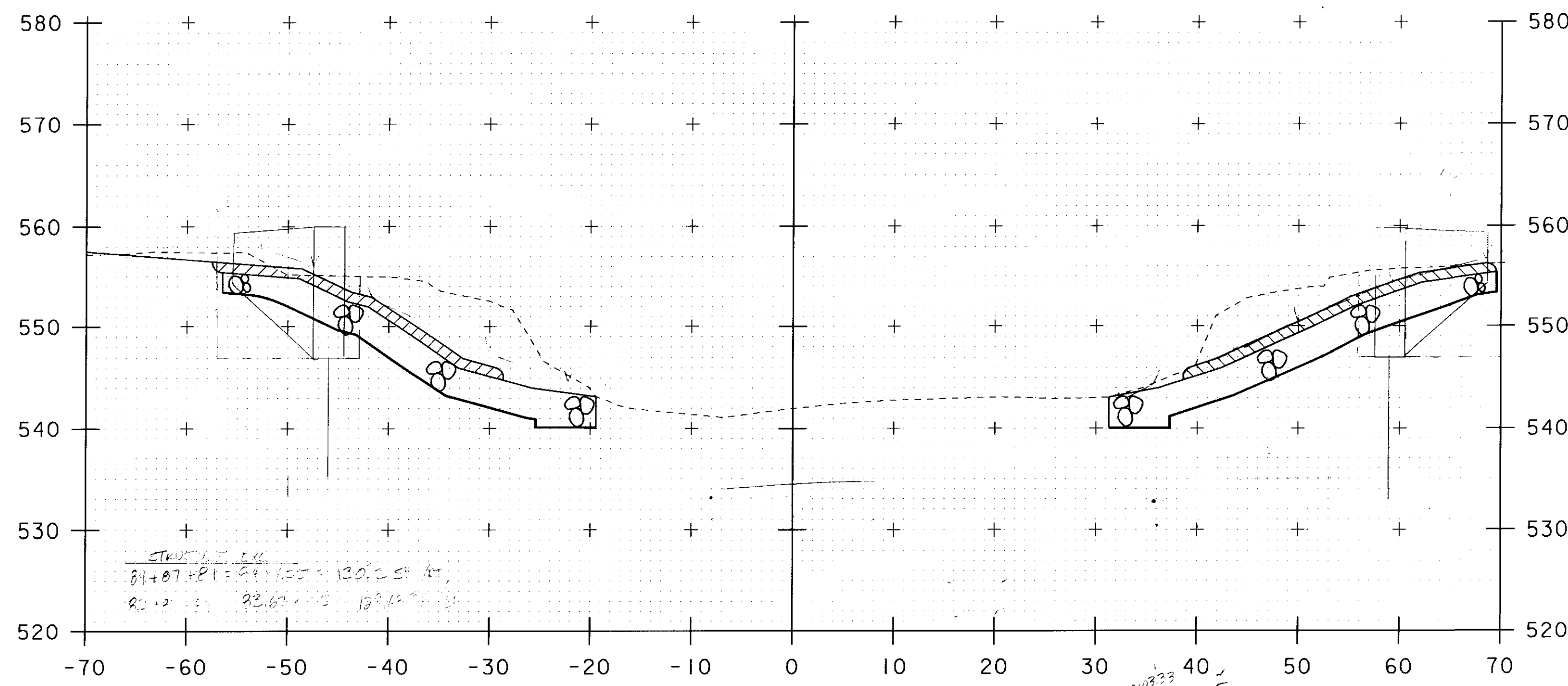
STA. 3+70 TO STA. 4+00

SCALE 1" = 10'-0"

PROJECT NAME: JAMAICA
 PROJECT NUMBER: BRO 1442(27)

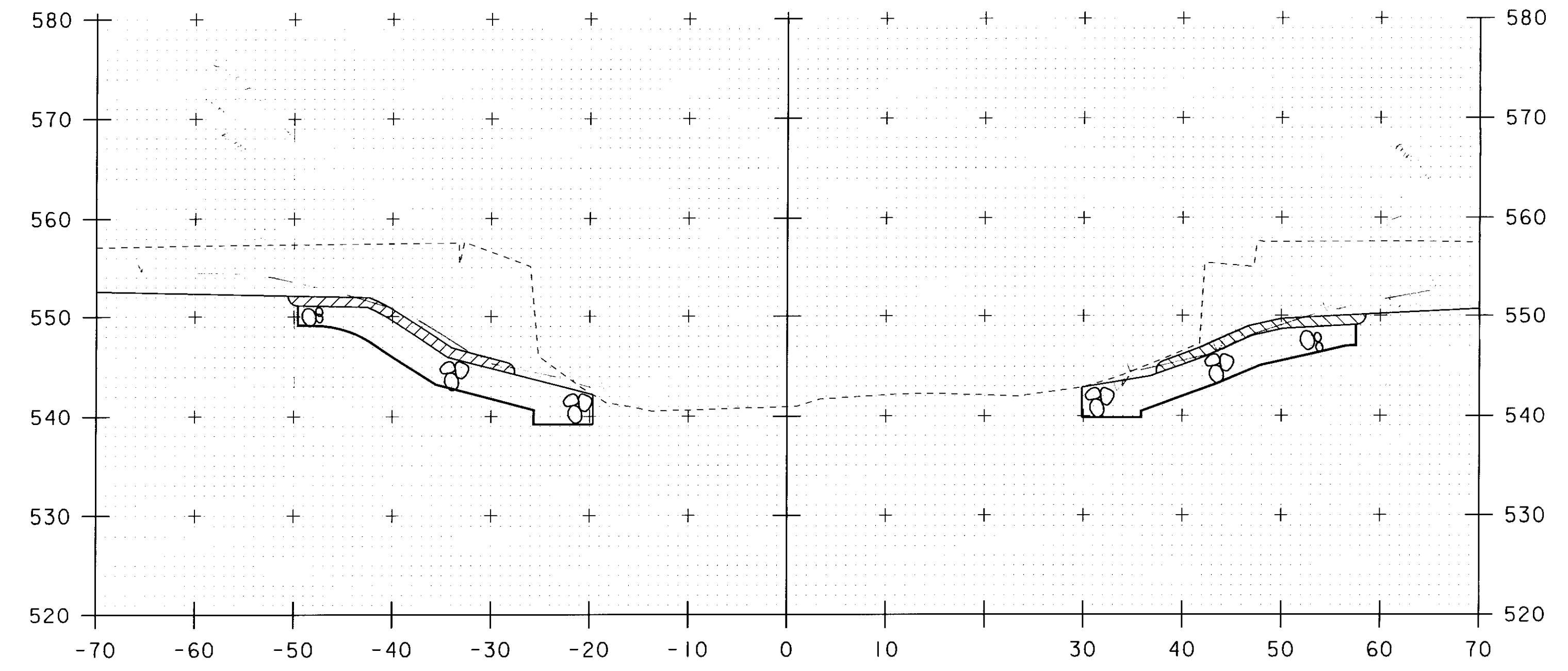
FILE NAME: s96J068xsl.dgn
 PROJECT LEADER: K. HIGGINS
 DESIGNED BY: J. LACROIX
 CHANNEL CROSS SECTIONS #2

PLOT DATE: 23-SEP-2010
 DRAWN BY: R. PELLETT
 CHECKED BY: J. LACROIX
 SHEET 41 OF 45

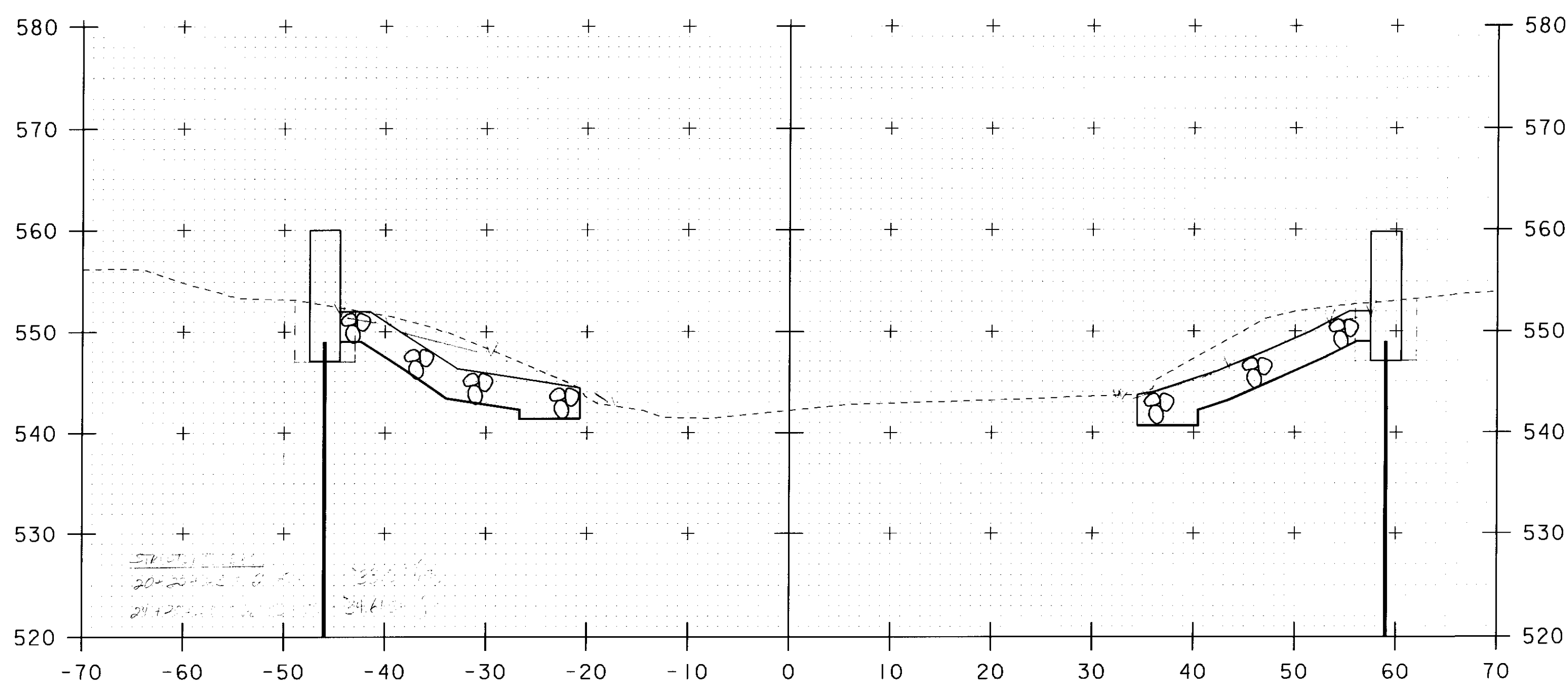


STA 4+12 LT & RT
BEGIN GRUBBING MATERIAL

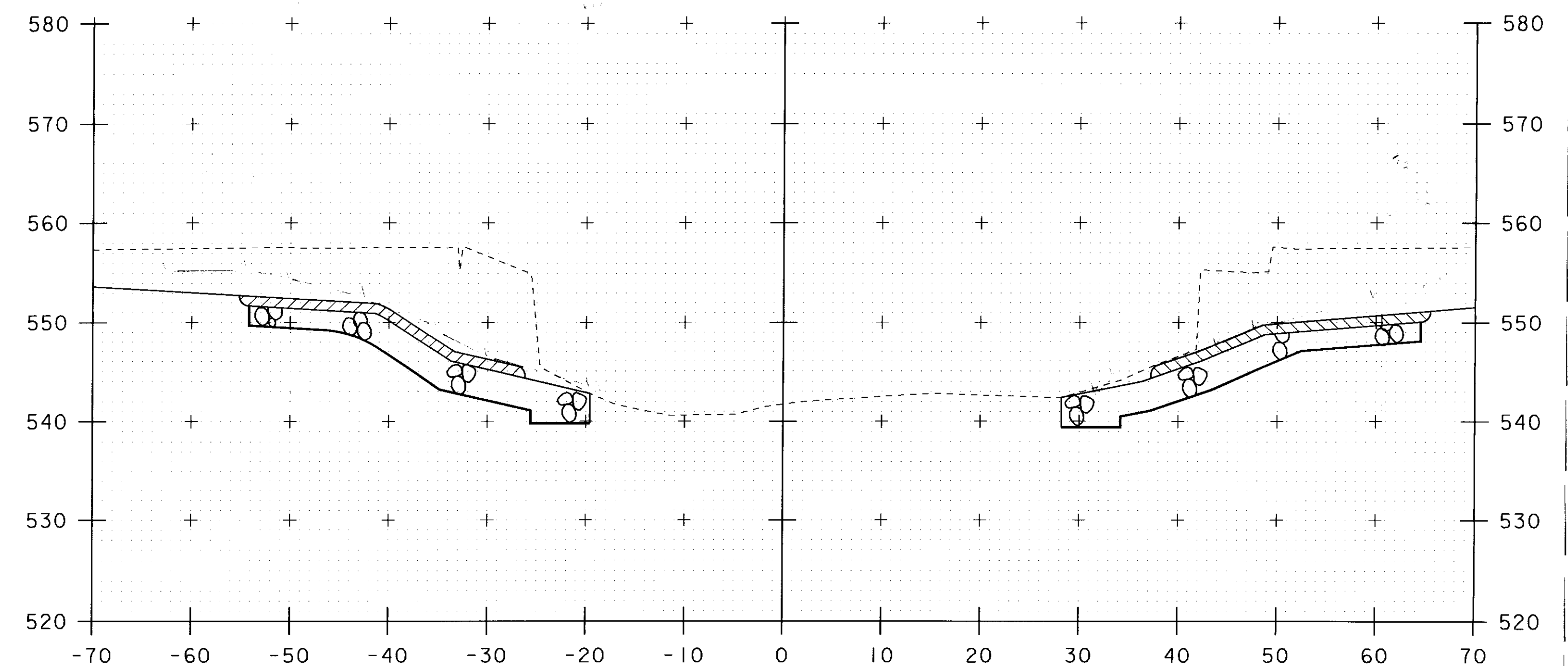
4+20



4+40

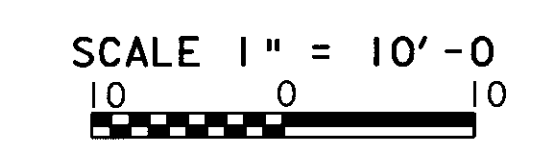


4+10

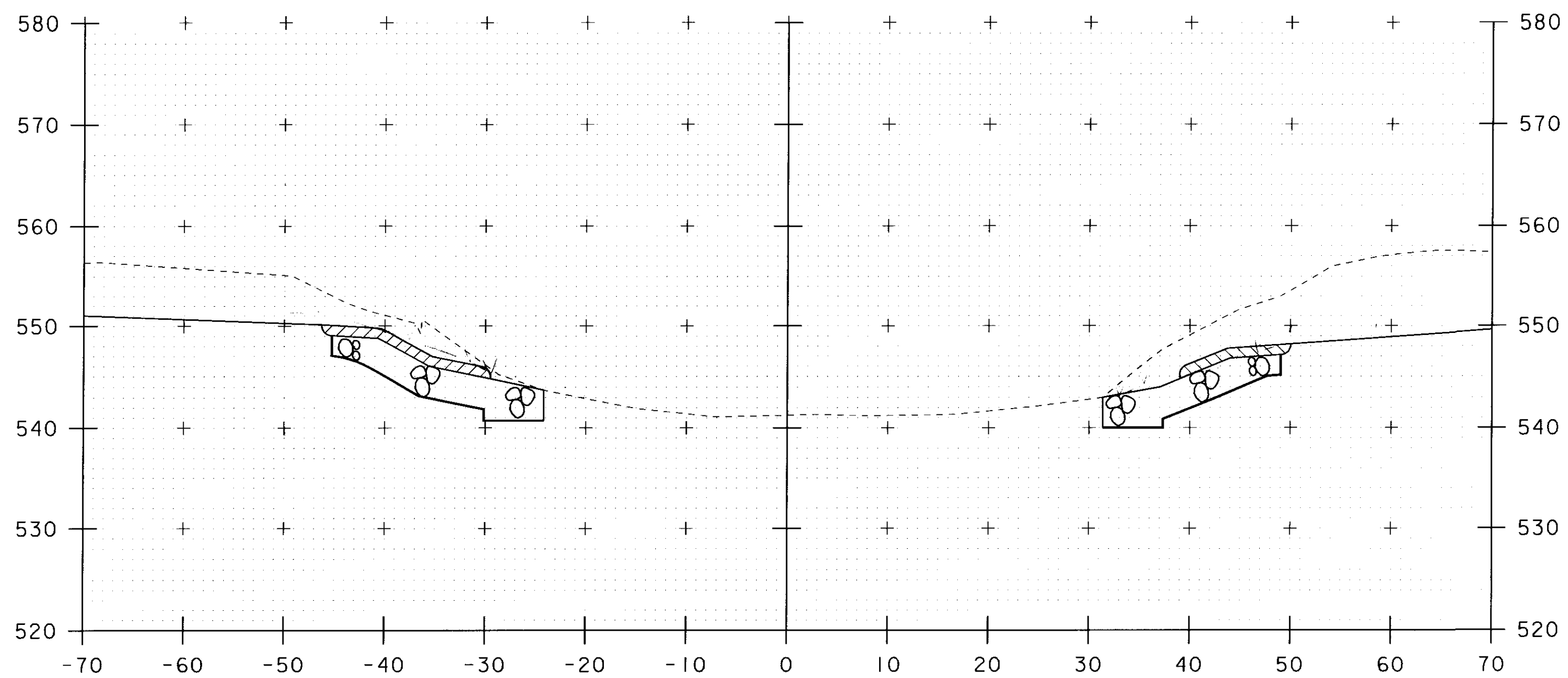


4+30

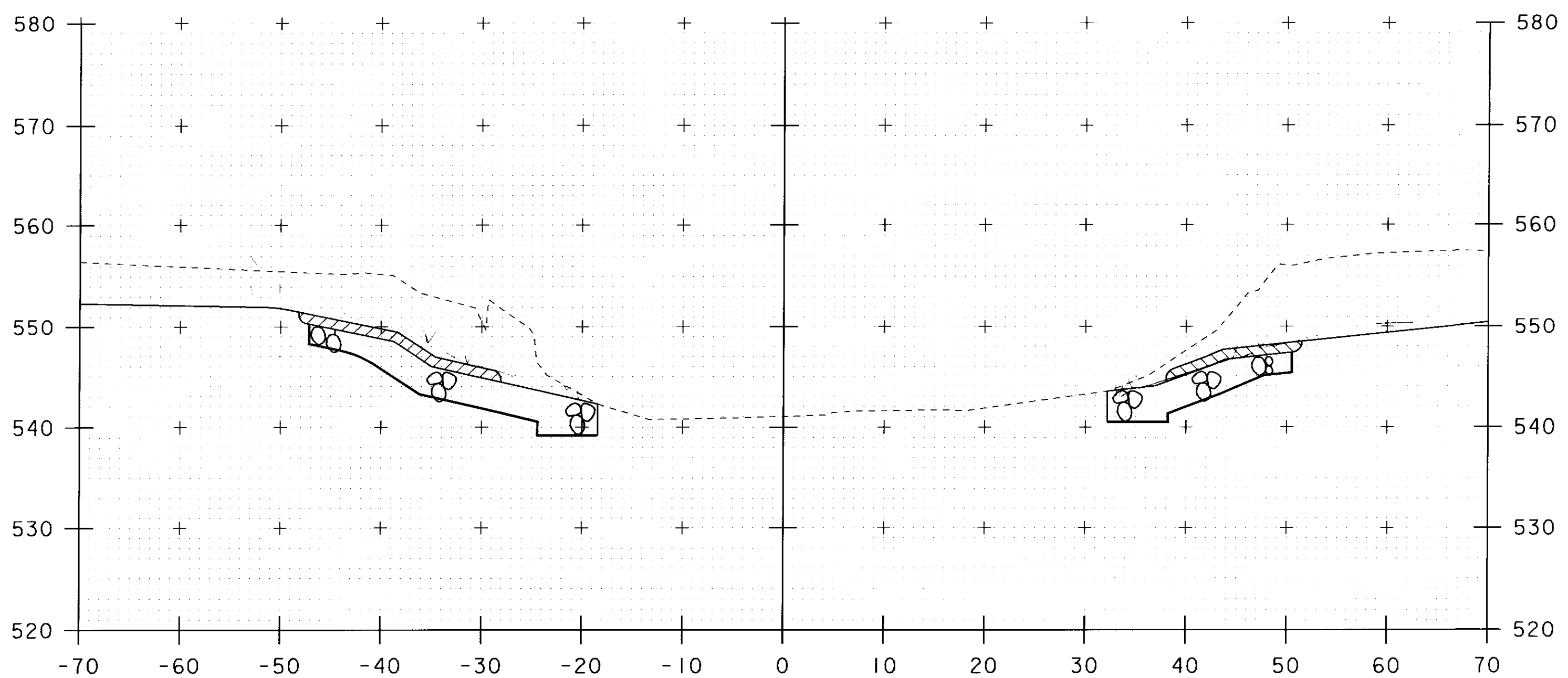
STA. 4+10 TO STA. 4+40



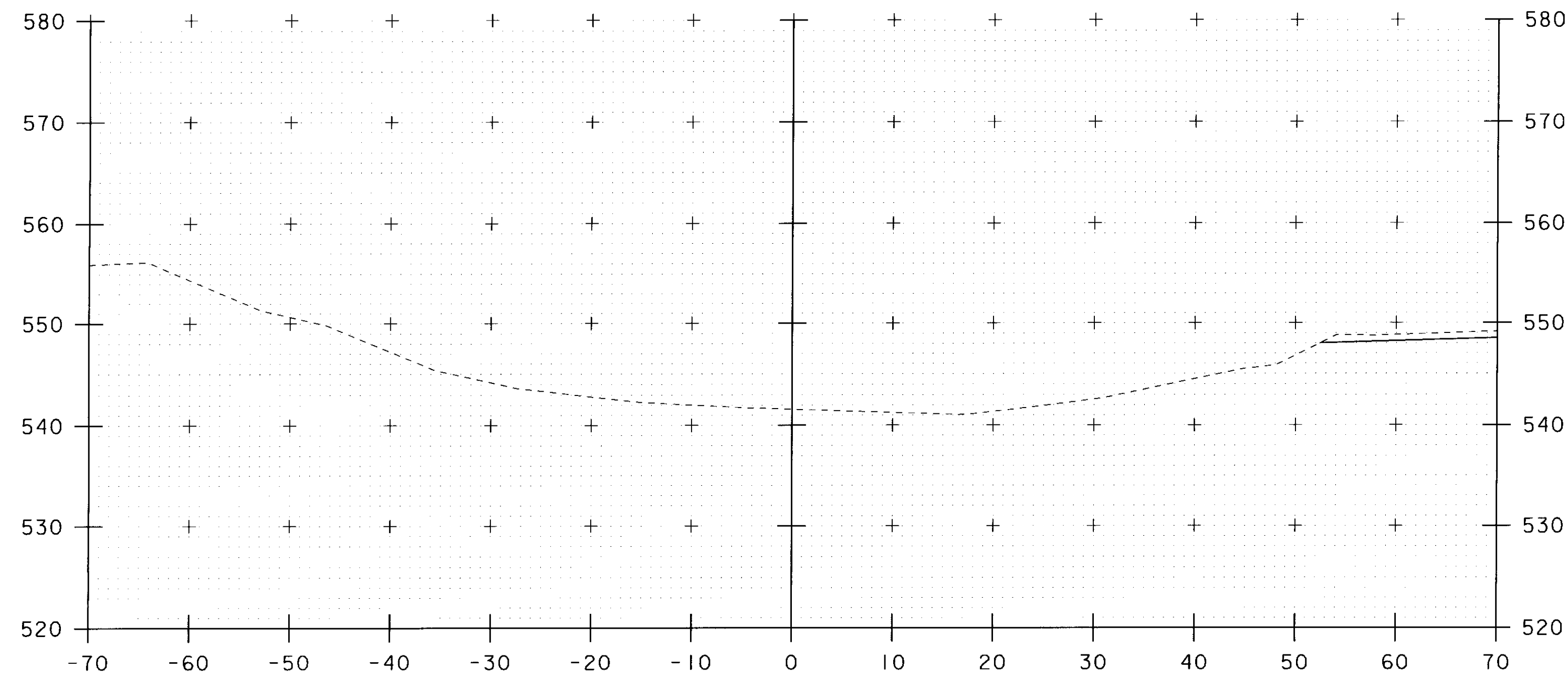
| | |
|------------------------------|------------------------|
| PROJECT NAME: JAMAICA | PLOT DATE: 23-SEP-2010 |
| PROJECT NUMBER: BRO 1442(27) | DRAWN BY: R. PELLETT |
| FILE NAME: s96j068xsl.dgn | CHECKED BY: J. LACROIX |
| PROJECT LEADER: K. HIGGINS | SHEET 42 OF 45 |
| DESIGNED BY: J. LACROIX | |
| CHANNEL CROSS SECTIONS #3 | |



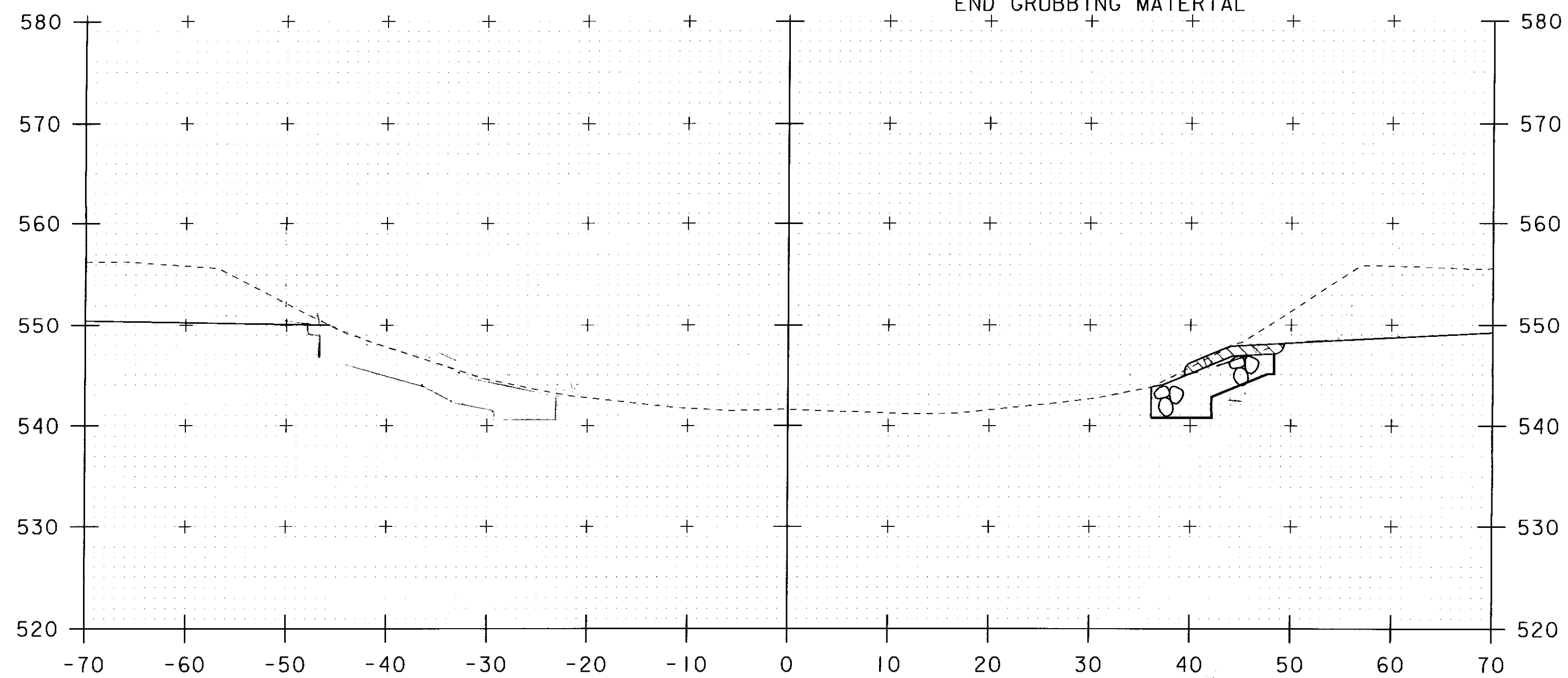
4+60



4+50



4+80



4+70

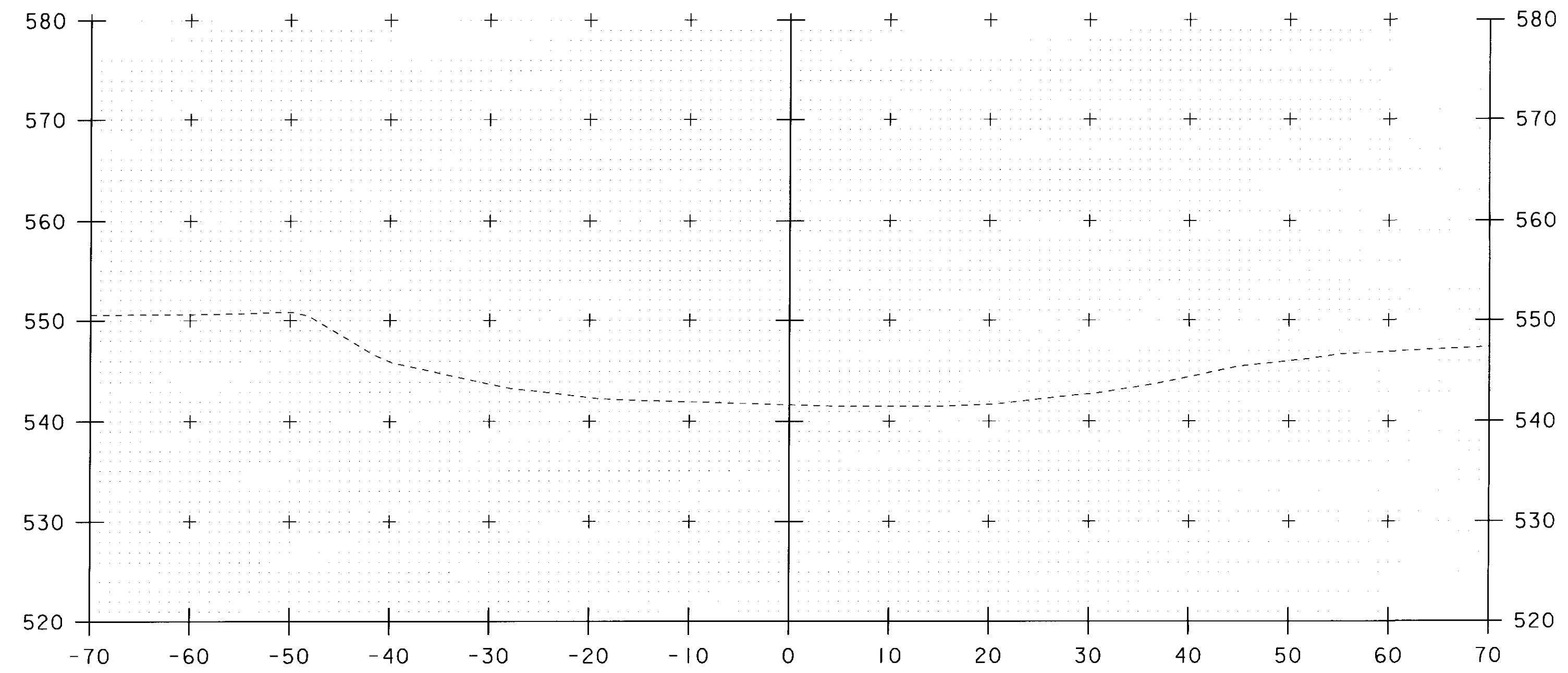
STA 4+75 RT
 END UNCLASSIFIED CHANNEL EXCAVATION
 END GEOTEXTILE UNDER STONE FILL
 END STONE FILL TYPE III
 END GRUBBING MATERIAL

STA 4+66 LT
 END UNCLASSIFIED CHANNEL EXCAVATION
 END GEOTEXTILE UNDER STONE FILL
 END STONE FILL TYPE III
 END GRUBBING MATERIAL

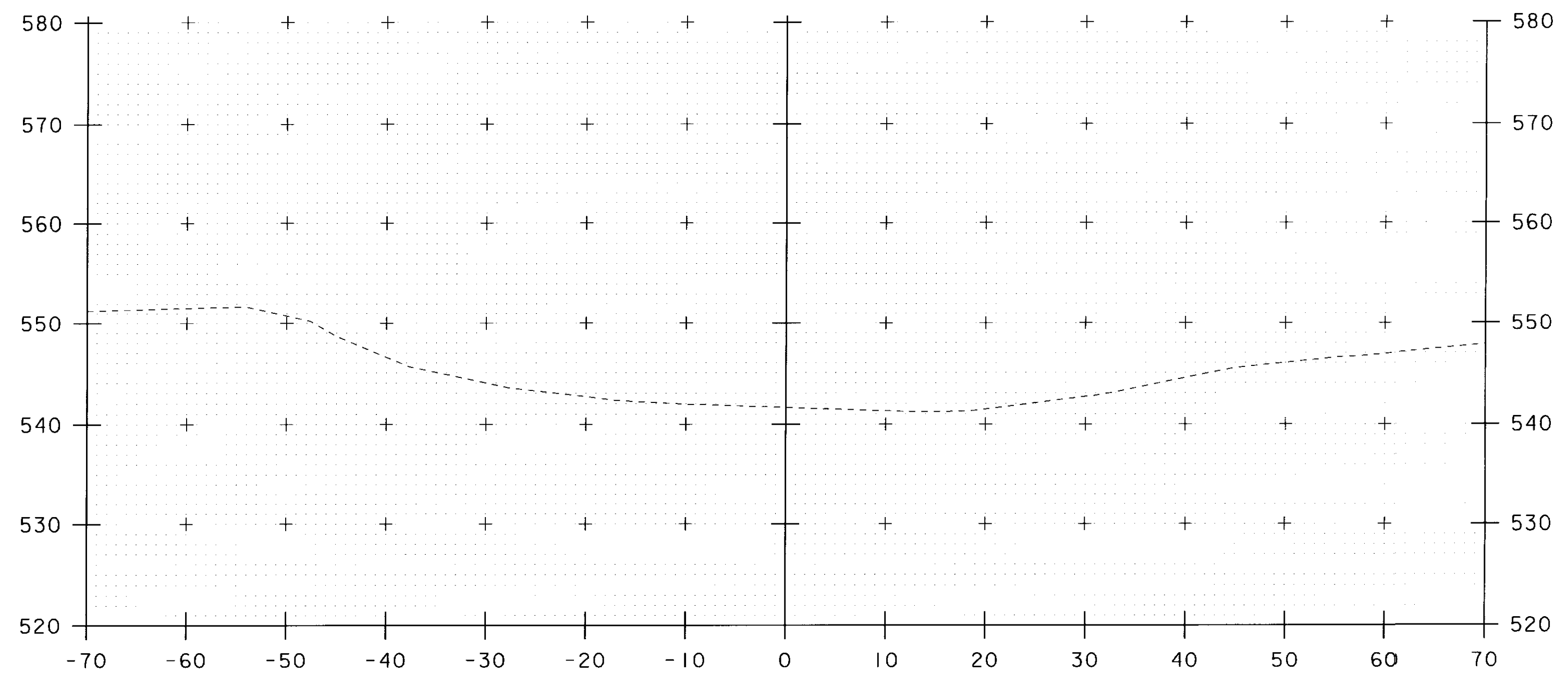
STA. 4+50 TO STA. 4+80

SCALE 1" = 10'-0"
 10 0 10

| | |
|------------------------------|------------------------|
| PROJECT NAME: JAMAICA | PLOT DATE: 23-SEP-2010 |
| PROJECT NUMBER: BRO 1442(27) | DRAWN BY: R. PELLETT |
| FILE NAME: s96j068xsl.dgn | CHECKED BY: J. LACROIX |
| PROJECT LEADER: K. HIGGINS | SHEET 43 OF 45 |
| DESIGNED BY: J. LACROIX | |
| CHANNEL CROSS SECTIONS *4 | |

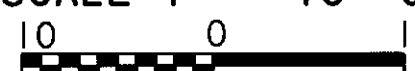


5+00



4+90

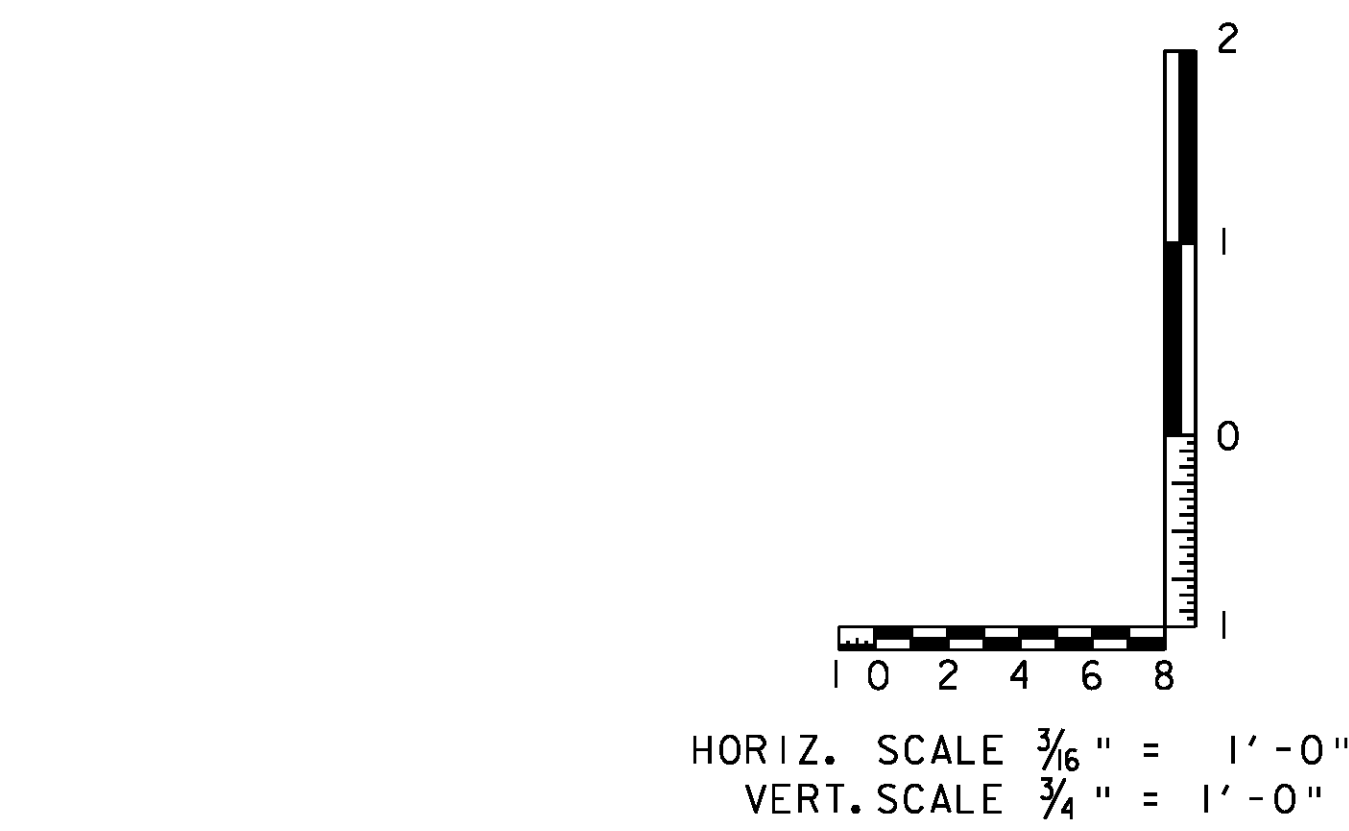
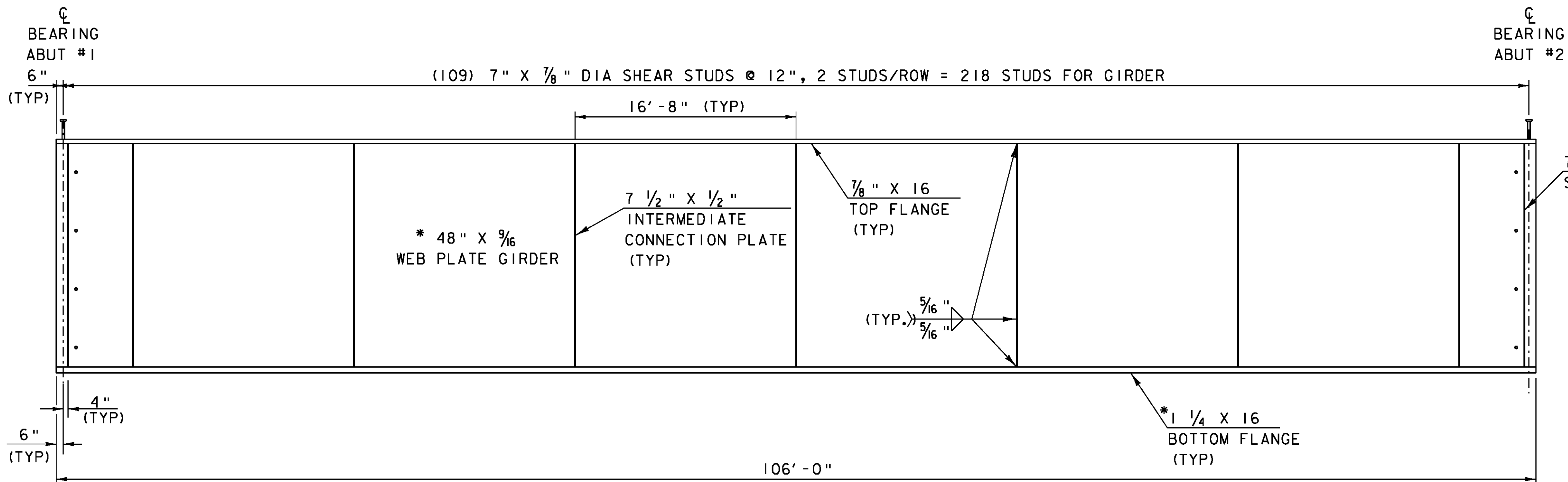
STA. 4+90 TO STA. 5+00

SCALE 1" = 10'-0"


PROJECT NAME: JAMAICA
 PROJECT NUMBER: BRO 1442(27)

FILE NAME: s96J068xsl.dgn
 PROJECT LEADER: K. HIGGINS
 DESIGNED BY: J. LACROIX
 CHANNEL CROSS SECTIONS #5

PLOT DATE: 23-SEP-2010
 DRAWN BY: R. PELLETT
 CHECKED BY: J. LACROIX
 SHEET 44 OF 45

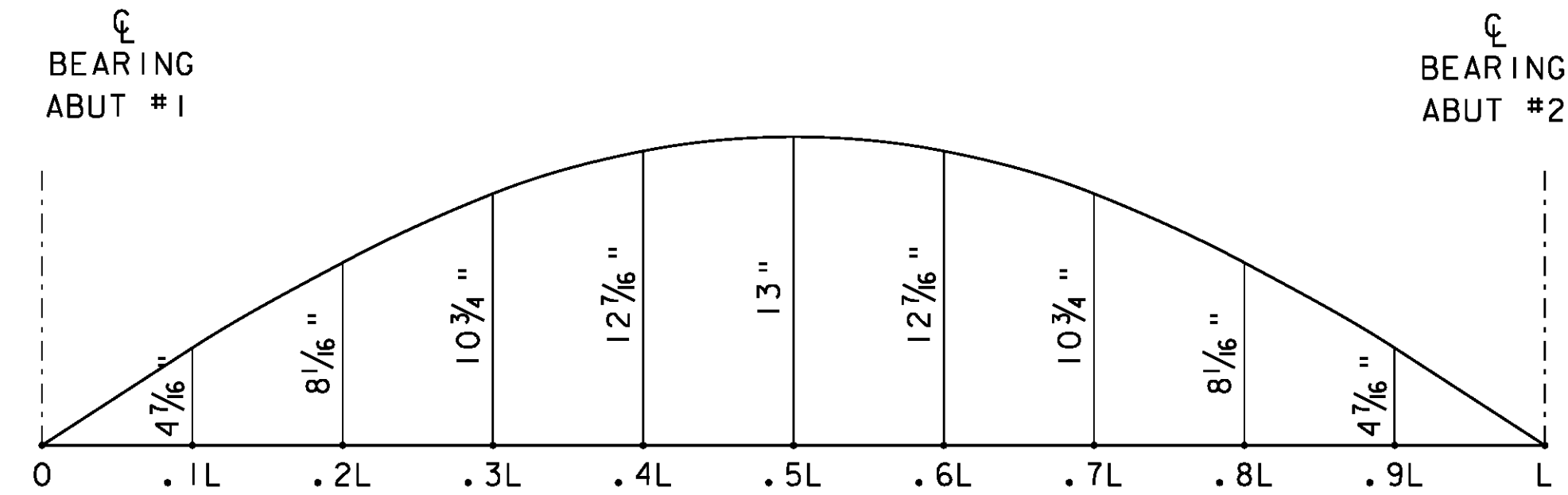


FRAMING PLAN

*DENOTES FRACTURE CRITICAL MEMBER
SEE GENERAL NOTES

FRAMING PLAN

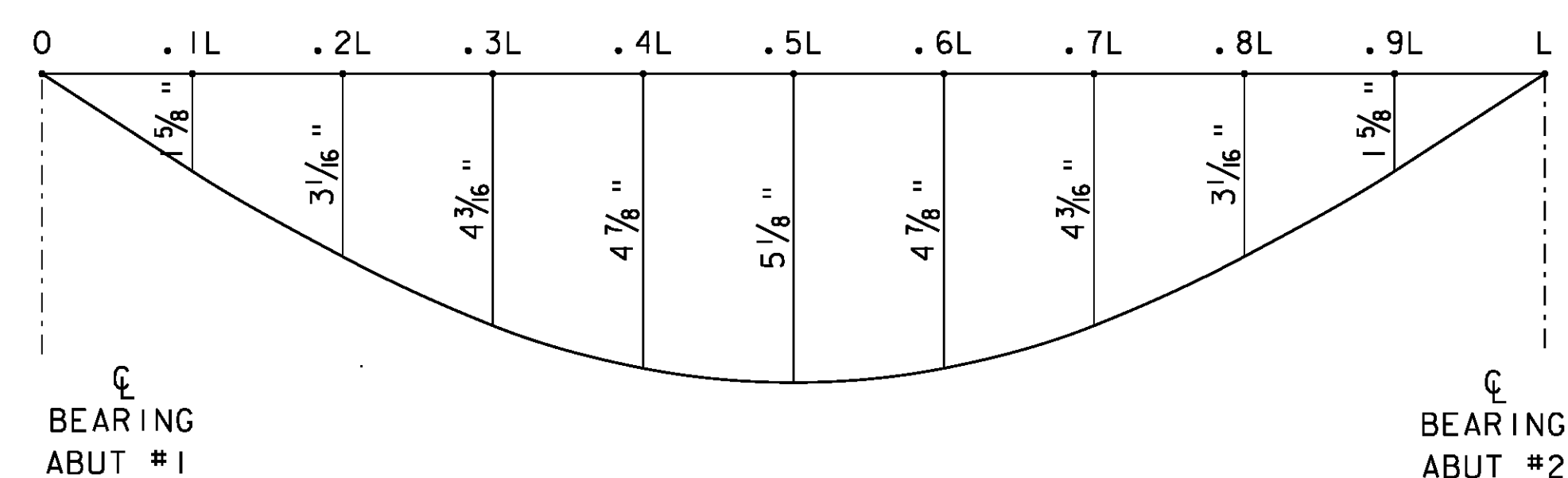
SCALE 3/16" = 1'-0"
1 0 2 4 6 8



CAMBER DIAGRAM

SCALE 3/32" = 1'-0"
1 0 4 8 12 16

12-17-2009



DEFLECTION IS AFTER DEAD LOADS
HAVE BEEN APPLIED
DEAD LOAD DEFLECTION DIAGRAM

NOTE: DEAD LOAD DEFLECTION INCLUDES
THE GIRDER SELF-WEIGHT.

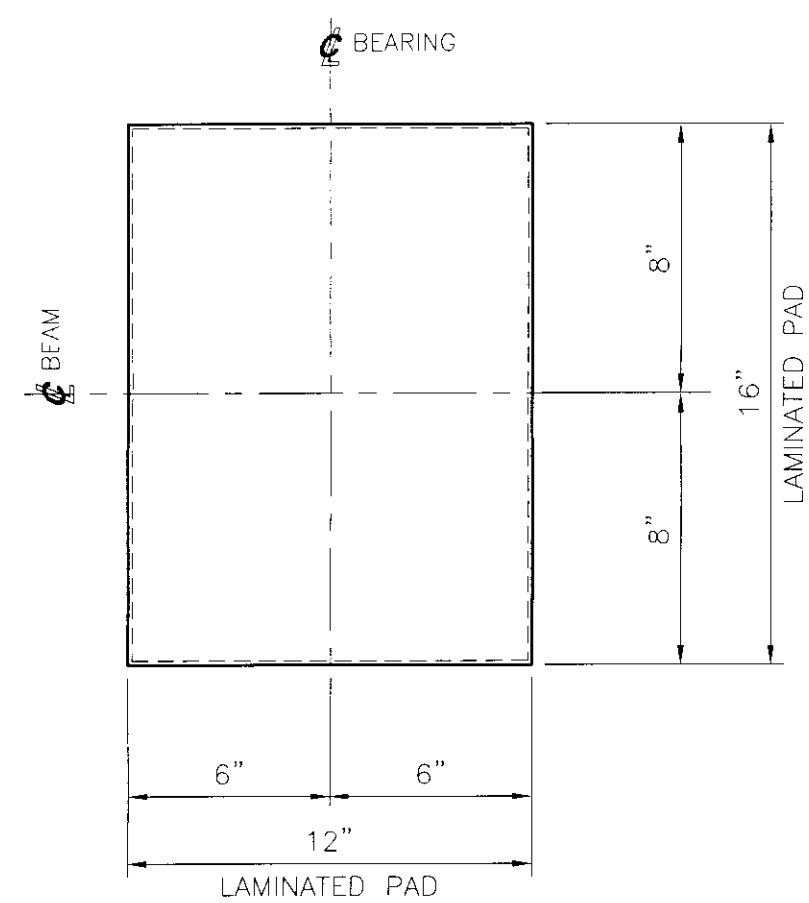
SCALE 3/32" = 1'-0"
1 0 4 8 12 16

REVISED CAMBER 12-17-2009

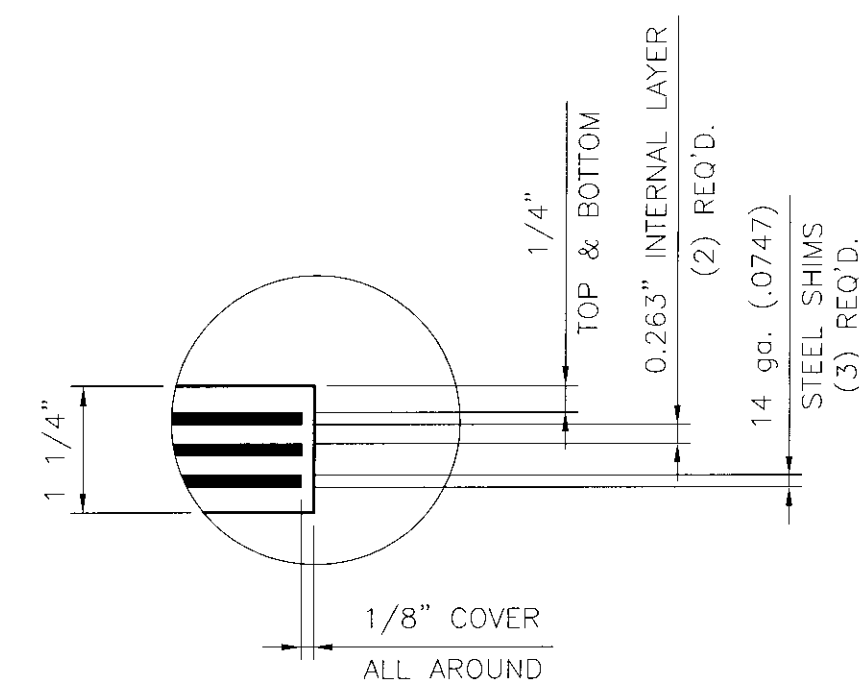
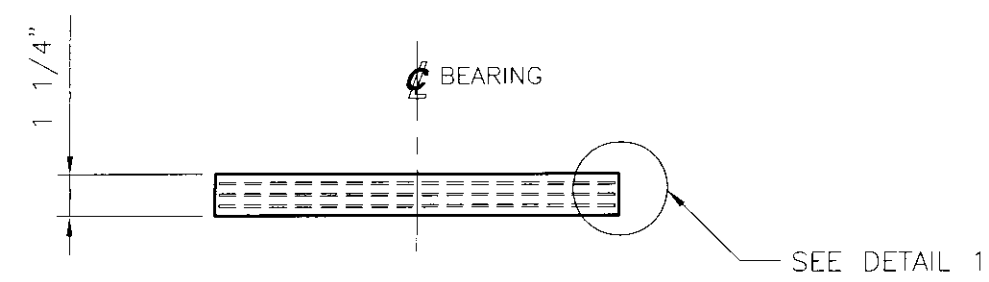
C BRG ABUT #1
STA 35+04.00
F.G. = 559.93

C BRG ABUT #2
STA 36+09.00
F.G. = 559.75

| | |
|-------------------------------|------------------------|
| PROJECT NAME: JAMAICA | |
| PROJECT NUMBER: BRO 1442(27) | |
| FILE NAME: s96j068de+.dgn | PLOT DATE: 17-DEC-2009 |
| PROJECT LEADER: K. HIGGINS | DRAWN BY: R. PELLETT |
| DESIGNED BY: J. LACROIX | CHECKED BY: J. LACROIX |
| FRAMING PLAN & CAMBER DIAGRAM | SHEET 45 OF 45 |



PLAN



DETAIL 1

(6) LAMINATED ELASTOMERIC BEARING — LEP-1
 LAMINATED PAD 1 1/4" X 12" X 16"
 60 DUROMETER GRADE 3 NEOPRENE
 (6) REQUIRED

SHOP NOTES

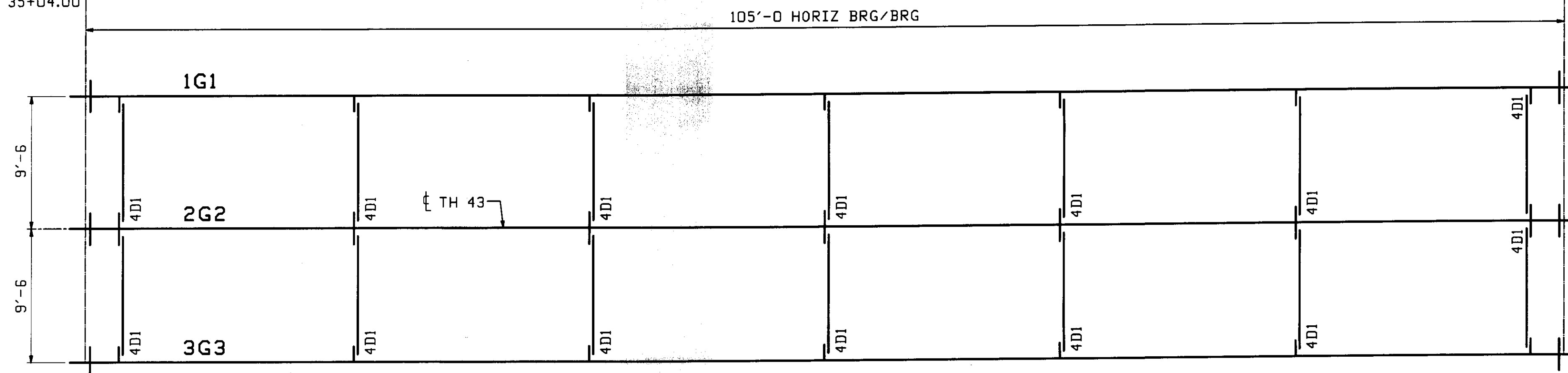
- MATERIALS:
- ELASTOMER: 60 DUROMETER GRADE 3 NEOPRENE. STEEL SHIMS: SHALL CONFORM TO AASHTO M270, GRADE 50 OR EQUIVALENT.
 - ALL DIMENSIONS ARE IN INCHES.
 - BEARING DESIGN METHOD - AASHTO LRFD SPECIFICATIONS, SECTION 14, METHOD B, AND IN ACCORDANCE WITH SECTION 831 OF THE 2006 VERMONT AGENCY OF TRANSPORTATION SPECIFICATIONS.
 - ELASTOMERIC BEARINGS SHALL BE INSTALLED AT AN AMBIENT TEMPERATURE BETWEEN 50° AND 80° F. CENTERLINE OF BEARING PAD SHALL BE INSTALLED AT THE CENTERLINE OF BEARINGS.

REVISIONS
 BY RMH DATE 1/24/10

| | | | |
|---|--------------|----------------------------|--|
| LAMINATED BEARING PADS | | | |
| VERMONT AGENCY OF TRANSPORTATION | | | |
| TOWN OF JAMAICA | | | |
| ROUTE NO. TH 43 CLASS III | | | |
| STATE | COUNTY | BRIDGE NO. | |
| VT | WINDHAM | 33 | |
| PROJECT NO.: BRO 1442 (27) | | | |
| DYNAMIC RUBBER: LAMINATED BEARING ASSEMBLIES | | | |
| Cosmae | | | |
| 1501 ROCKY RIDGE ROAD P.O. BOX 2139 ATHENS, TEXAS 75751 | | | |
| SCALE: NONE | DRAWN BY: PC | CHECKED BY: ELS | |
| | DATE: 7/8/10 | DATE: 7/8/10 | |
| SHEET 1 OF 1 | | JOB NO.: 10546 | |
| DESIGNED BY: RENAULD BROS., INC. | | DRAWING NUMBER: 10546-D1 0 | |

BRG ABUT 1
STA 35+04.00

BRG ABUT 2
STA 36+09.00



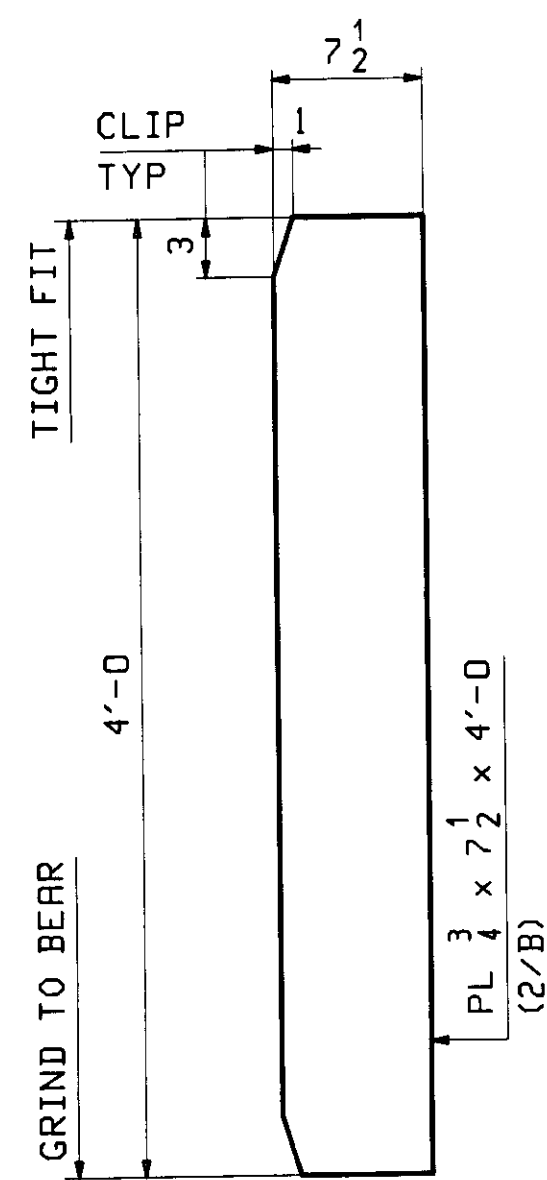
FRAMING PLAN

| FIELD BOLT LIST | | A325 Type 3 BOLTS | | | | | | | | | |
|-----------------|------------|-------------------|-----------|-------------|------------|------|-----------------------------|-----|-------------|------------------------------|-----------------------------------|
| LINE | NO. REG'D. | BOLT DIA. | BOLT LEN. | BOLTS/CONN. | # OF CONN. | GRIP | THICKNESS OF PCS. CONNECTED | | WASHER CODE | PIECES CONNECTED AND REMARKS | |
| 1 | | | | | | | | | | | INT. DIAPHRAGMS - 4D1 |
| 2 | 252 | 7/8 | 2 1/2 | 9 | 2B | 1 | 1/2 | 1/2 | | 1 | DIAPHRAGM WEB TO CONNECTION PLATE |

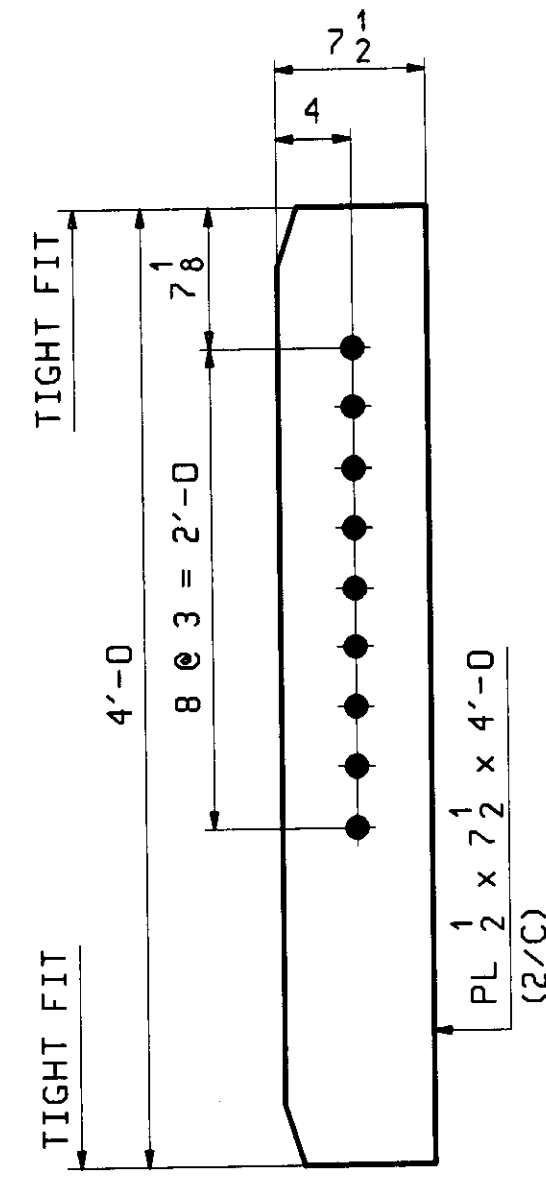
WASHER CODES
1: 1 Hard Flat Washer

| FIELD BOLT SUMMARY | | EXACT COUNT - NONE EXTRA | | | | REMARKS |
|--------------------|--------------|---------------------------------|-------------|-----------|--------------|---------|
| LINE | NO. OF BOLTS | BOLT DIA. | BOLT TYPE | BOLT LEN. | ACTUAL COUNT | |
| 1 | 252 | 7/8 | A325 Type 3 | 2 1/2 | 252 | |
| 2 | | | | | | |
| 3 | 252 | Hard Flat Washers for 7/8" BOLT | | F436-3 | | |
| 4 | | | | | | |
| 5 | | | | | | |
| 6 | | | | | | |

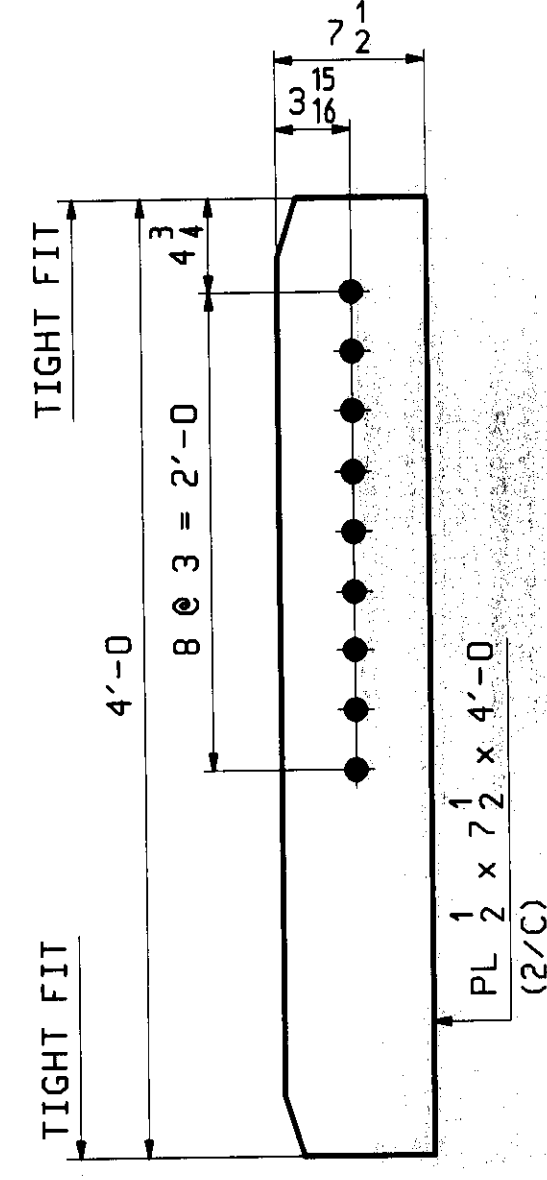
| | | | | | | |
|---|------|------------------------|---------|--------|---------|-------------|
| REV. | DATE | REMARKS | DWN | CHK | APVL | SHOP |
| 0 | | | | | | |
| MATERIAL: | | SURFACE PREP. & PAINT: | | HOLES: | | SHOP BOLTS: |
| DESCRIPTION: FRAMING PLAN & FIELD BOLTS | | | | | | |
| CASCO BAY STEEL STRUCTURES, INC. 75 SPRING HILL ROAD SACO, MAINE 04072 PHONE (207) 282-7360 FAX. (207) 282-1179 | | | | | | |
| STRUCTURE: | | DRAWN: | | DATE: | | |
| BRIDGE OVER WARDSBORO BROOK | | JTB | | 12/20 | | |
| ROUTE TH 43, BRIDGE NO. 33 | | CHKD: | | DATE: | | |
| | | ELC | | 1/7/10 | | |
| LOCATION: JAMAICA, WINDHAM COUNTY, VT | | | JOB NO. | | DWG NO. | |
| PROJ NO. BRO 1442(27) | | | 437 | | E1 | |
| CUSTOMER: VERMONT A.O.T. | | | REV: | | | |



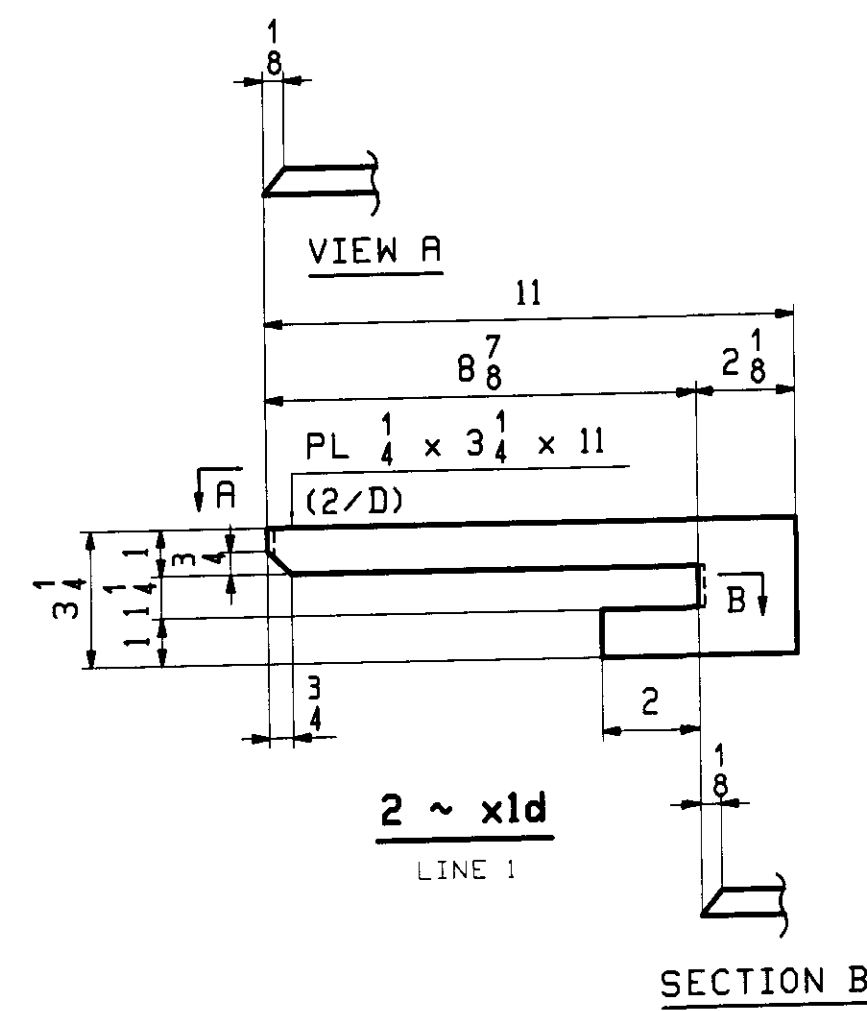
12 ~ x1a
BRG STIFF



14 ~ x1b
INT DIAPH CONN
(HIGH END)

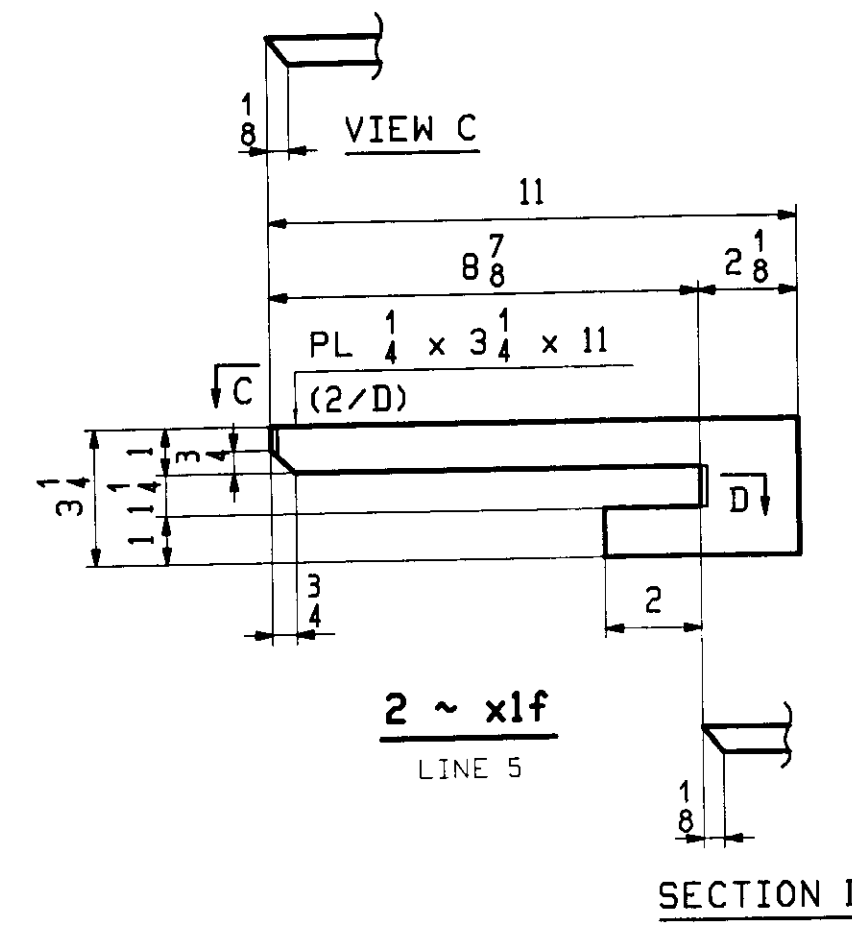


14 ~ x1c
INT DIAPH CONN
(LOW END)



2 ~ x1d
LINE 1

SECTION B



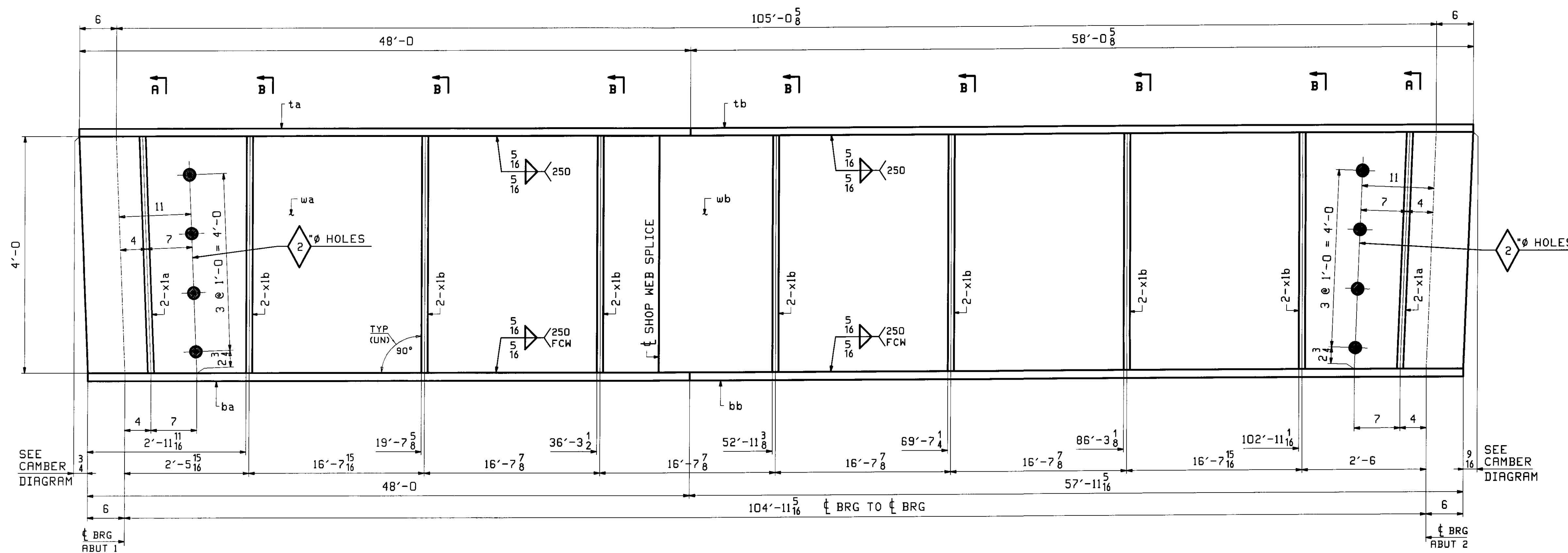
2 ~ x1f
LINE 5

SECTION D

APPROVED: *[Signature]*
KMH 1/29/10

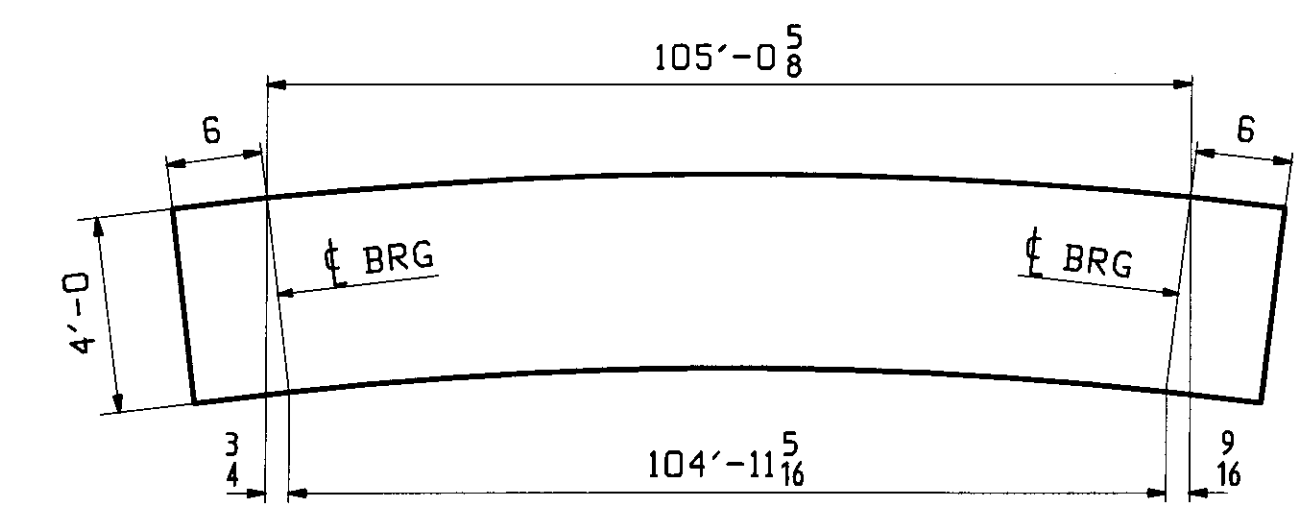
| 0 | | | | | | |
|---|------|------------------------|---------|--------------|------|-------------|
| REV. | DATE | REMARKS | DWN | CHK | APVL | SHOP |
| | | | | | | |
| MATERIAL: | | SURFACE PREP. & PAINT: | | HOLES: | | SHOP BOLTS: |
| M270-50W | | SEE DWG GNI | | 19-ø 16-ø | | NONE |
| DESCRIPTION: GIRDER STANDARD DETAILS | | | | | | |
| CASCO BAY STEEL STRUCTURES, INC. | | | | | | |
| 75 SPRING HILL ROAD SACO, MAINE 04072 | | | | | | |
| PHONE (207) 282-7360 FAX (207) 282-1179 | | | | | | |
| STRUCTURE: | | | DRAWN: | DATE: | | |
| BRIDGE OVER WARDSBORO BROOK | | | JTB | 12/20 | | |
| ROUTE TH 43, BRIDGE NO. 33 | | | CHKD: | DATE: | | |
| | | | ELC | 1/7/10 | | |
| LOCATION: JAMAICA, WINDHAM COUNTY, VT | | | JOB NO. | DWG NO. | | |
| PROJ NO. BRO 1442(27) | | | 437 | X1 | | |
| CUSTOMER: VERMONT A.O.T. | | | | REV. | △ | |

| ABM INFO | | SHIP | BILL OF MATERIAL | | | | JOB NO. | DRAWING NO. | REV. |
|----------|------|------|------------------|------|---------------------------------------|----------------------|---------|-------------|-------------------|
| PAGE | LINE | MARK | QTY | MARK | MATERIAL | LENGTH FT INCHES | REMARKS | WT | PROCUREMENT NOTES |
| | | 2G2 | 1 | | GIRDER | | | 23033 | |
| 1 | G | | 1 | wa | PL $\frac{9}{16} \times 48$ | 45 0 $\frac{9}{16}$ | (F2) | | |
| 1 | E | | 1 | wb | PL $\frac{9}{16} \times 48$ | 61 0 $\frac{15}{16}$ | (F2) | | |
| 1 | L | | 1 | ta | PL $\frac{7}{8} \times 16$ | 48 0 | | | |
| 1 | J | | 1 | tb | PL $\frac{7}{8} \times 16$ | 58 0 $\frac{5}{8}$ | | | |
| 1 | C | | 1 | ba | PL $1 \frac{1}{4} \times 16$ | 48 0 | (F2) | | |
| 1 | A | | 1 | bb | PL $1 \frac{1}{4} \times 16$ | 57 11 $\frac{5}{16}$ | (F2) | | |
| 2 | B | | 4 | x1a | PL $\frac{3}{4} \times 7 \frac{1}{2}$ | 4 0 | MIE | | |
| 2 | C | | 14 | x1b | PL $2 \times 7 \frac{1}{2}$ | 4 0 | | | |

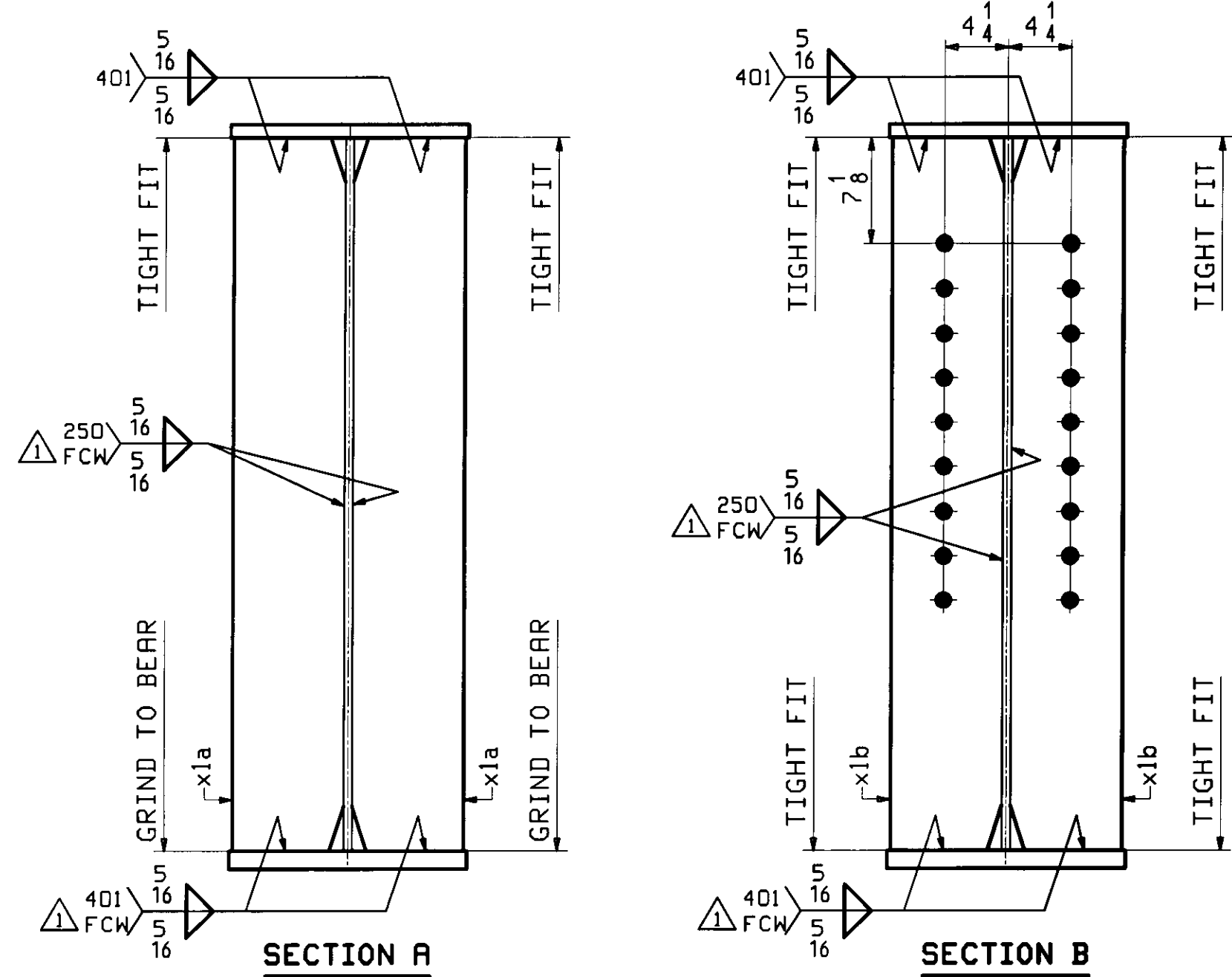


ONE - GIRDER - 2G2

FOR GIRDER STANDARDS SEE DRAWING X1.
 FOR CAMBER & FLANGE DIAGRAMS SEE DRAWING WS1.
 FOR GENERAL NOTES SEE DRAWING GNI.
 (F2) DENOTES MATERIAL SUBJECT TO FRACTURE CRITICAL TESTING.

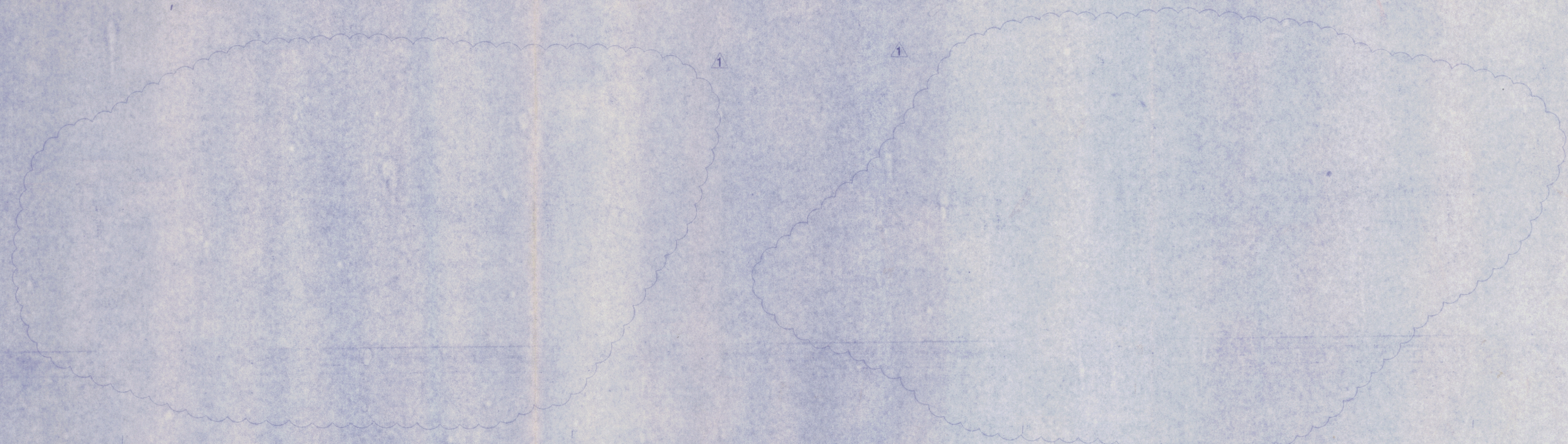


ORIENTATION DIAGRAM
FOR CAMBER SEE DWG WS1



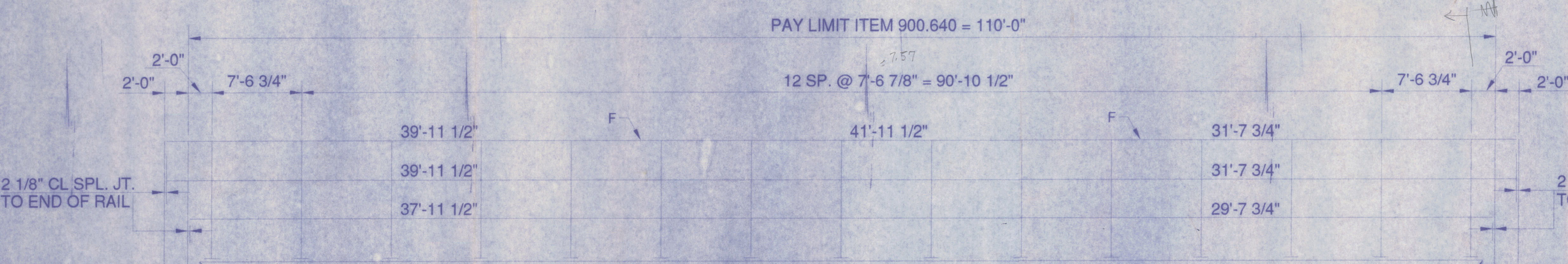
| | | | | | |
|----------------------------------|--------------------------------------|-----------------------------|-------------|---------------|------|
| 1/18/10 | ADD 'FCW' NOTATION AT STIFF SECTIONS | JTB | ELC | | |
| REV. DATE | REMARKS | DWN | CHK | APVL | SHOP |
| MATERIAL: | SURFACE PREP. & PAINT: | HOLES: | SHOP BOLTS: | | |
| M270-50W(UN) | SEE DWG GNI | $15 \frac{1}{16} \phi$ (UN) | NONE | | |
| DESCRIPTION: GIRDER - 2G2 | | | | | |
| CASCO BAY STEEL STRUCTURES, INC. | | | | | |
| 75 SPRING HILL ROAD | | SACO, MAINE 04072 | | | |
| PHONE (207) 282-7360 | | FAX. (207) 282-1179 | | | |
| STRUCTURE: | BRIDGE OVER WARDSBORO BROOK | | DRAWN: | DATE: | |
| | ROUTE TH 43, BRIDGE NO. 33 | | JTB | 12/20 | |
| | | | CHKD: | DATE: | |
| | | | ELC | 1/7/10 | |
| LOCATION: | JAMICA, WINDHAM COUNTY, VT | | JOB NO. | DWG NO. | |
| PROJ NO. | BRO 1442(27) | | 437 | 2 | |
| CUSTOMER: | VERMONT A.O.T. | | | REV. Δ | |

RECEIVED
 JAN 25 2010
 APPROVED
 BY KMH DATE 1/29/10



| MARK OR USE | QTY. | SHAPE | SHAPE | | REMARKS |
|------------------|------|-----------------------|-------|--------|---|
| | | | FT. | IN. | |
| ITEM NO. 900.640 | | | | | |
| RAIL | 4 | T.S. 6"x6"x3/16" WALL | 41 | 11 1/2 | A500 GR B * |
| RAIL | 4 | T.S. 6"x6"x3/16" WALL | 39 | 11 1/2 | A500 GR B W/EXP. SLOTS @ ONE END * |
| RAIL | 4 | T.S. 6"x6"x3/16" WALL | 31 | 7 3/4 | A500 GR B W/EXP. SLOTS @ ONE END * |
| FIXED SPLICE | 8 | T.S. 5"x5"x5/16" WALL | 2 | 3 | A500 GR B w/3-PL 1/4"x4"x2'-2" A36 CVN A370 |
| EXP. SPLICE | 8 | T.S. 5"x5"x5/16" WALL | 3 | 0 | A500 GR B W/3-PL 1/4"x4" A36 CVN A 370 |
| SPLICE BOLT | 64 | 3/4"Ø HEX BOLT | | 7 1/2 | A325 w/N, 2FW |
| RAIL | 2 | T.S. 5"x3"x1/4" WALL | 41 | 11 1/2 | A500 GR B * |
| RAIL | 2 | T.S. 5"x3"x1/4" WALL | 37 | 11 1/2 | A500 GR B W/EXP. SLOTS @ ONE END * |
| RAIL | 2 | T.S. 5"x3"x1/4" WALL | 29 | 7 3/4 | A500 GR B W/EXP. SLOTS @ ONE END * |
| FIXED SPLICE | 4 | BAR 2 1/8"x4 1/4" | 2 | 3 | A572 GR50 |
| EXP. SPLICE | 4 | BAR 2 1/8"x4 1/4" | 3 | 0 | A572 GR50 |
| SPLICE BOLT | 32 | 3/4"Ø HEX BOLT | | 4 1/2 | A325 w/N, 2FW |
| RAIL POST BOLT | 120 | 7/8"Ø ROUND HEAD BOLT | | 8 | A325W/N,SQW,LW |
| L CLIP | 30 | L 5"x5"x5/8" | | 6 1/8 | A572 GR50 |
| L POST BOLT | 60 | 3/4"Ø HEX BOLT | | 2 1/4 | A325 W/N,LW |
| L RAIL BOLT | 30 | 3/4"Ø HEX BOLT | | 8 | A325 W/N,LW |
| POST | 30 | W6X25X2-7 3/4" | 2 | 9 | A572 GR50 W/PL 1 1/4"x10"x 1'-2" |
| ANCHOR PLATE | 30 | PL 3/8"x10" | 1 | 2 | A36 |
| ANCHOR STUD | 120 | 1"Ø FULLY THREADED | 1 | 2 | A449 W4N, 4FW |

| MARK OR USE | QTY. | SHAPE | SHAPE | | REMARKS |
|-----------------------------|------|----------------------|-------|-------|--------------------------------|
| | | | FT. | IN. | |
| ITEM NO. 900.620 TRANSITION | | | | | |
| RAIL | 4 | T.S. 5"x3"x1/4" WALL | 4 | 5 3/4 | A500(710-23)W/5'-0" FLAREBACK. |



* DROP WEIGHT TEAR TEST PER ASTM E436

**NORTH & SOUTH VIEW LOOKING NORTH
(3 RAIL AMERICAN SERIES)
W/ STD ANCHORAGE**

KEY:
F=1/2" FXD. SPL. JT.

ALL DIMENSIONS MUST BE FIELD VERIFIED
PRIOR TO FABRICATION BY CONTRACTOR

PAY LIMIT FOR 3 RAIL= 220.0000 FT. (APPROX.)

| | | | |
|------------------|-----------------|--------------------|---------------------|
| DRAWN BY: ESB | DATE 1/27/10 | CHECKED BY: DCK | SHEET NO. 1 OF 3 |
|------------------|-----------------|--------------------|---------------------|

BRIDGE RAILING LAYOUT

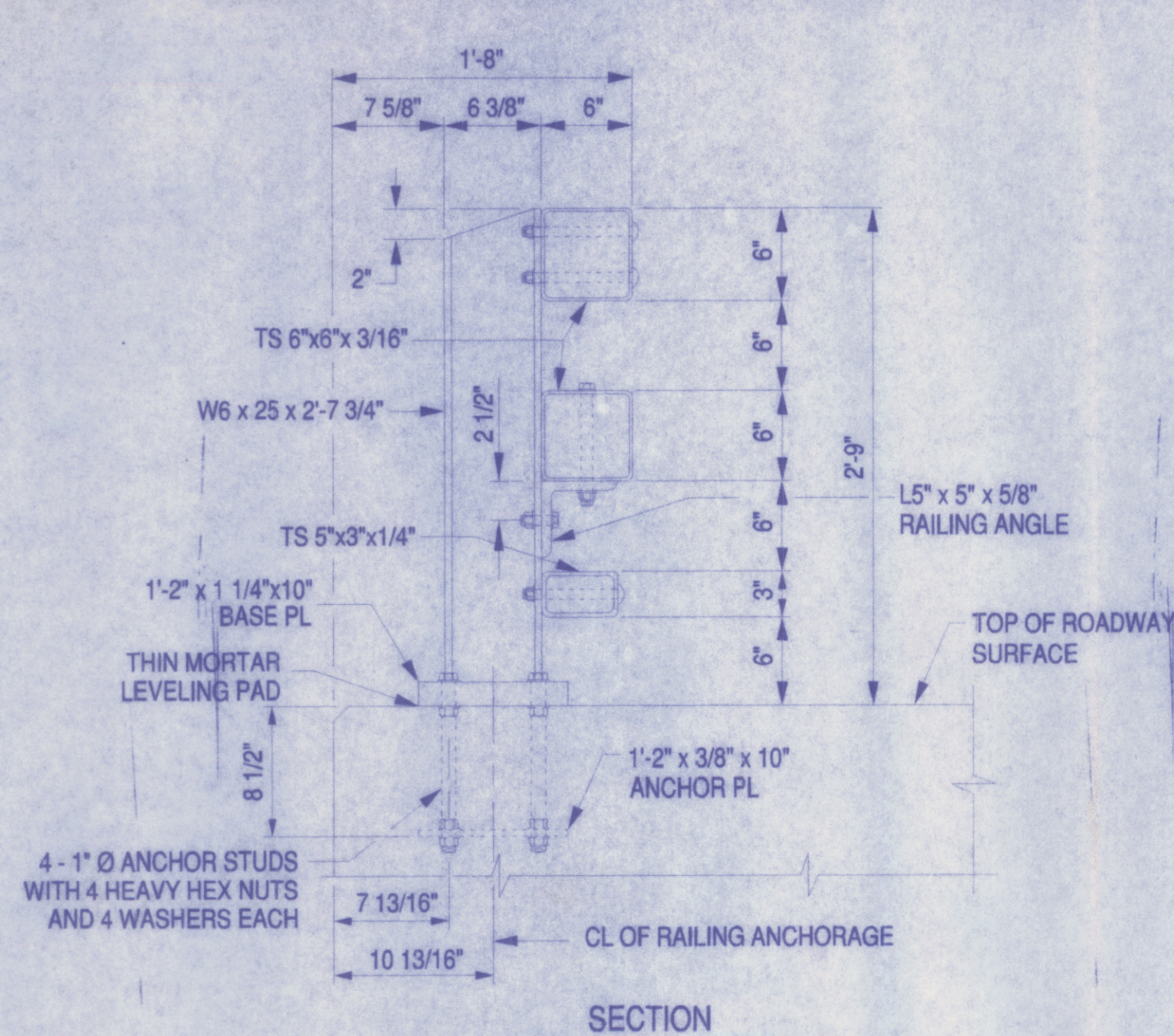
STATE OF VERMONT AGENCY OF TRANSPORTATION
HIGHWAY TH 43 (BR. 33) OVER WARDBORO BROOK
IN THE TOWN OF JAMAICA IN WINDHAM COUNTY

REV. DATE: 2/16/10

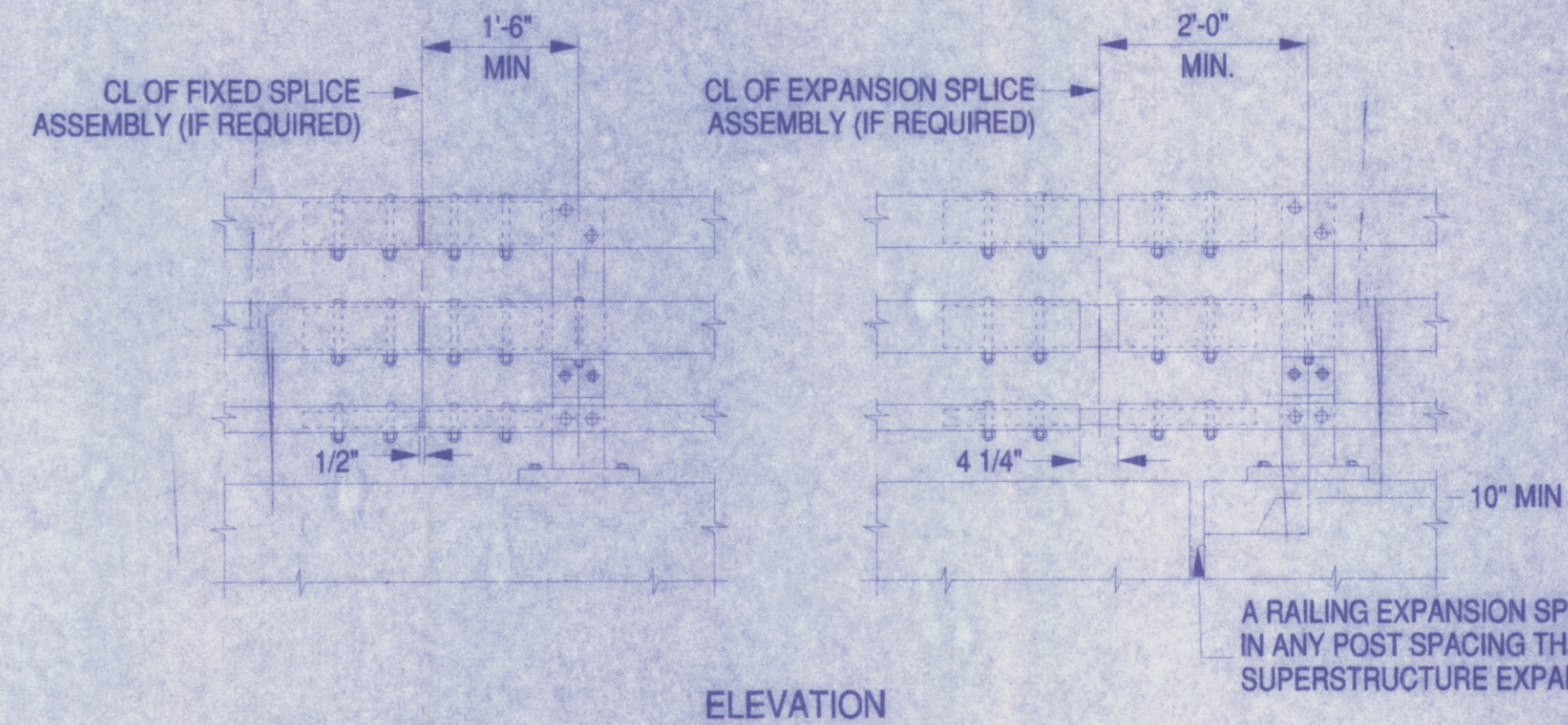
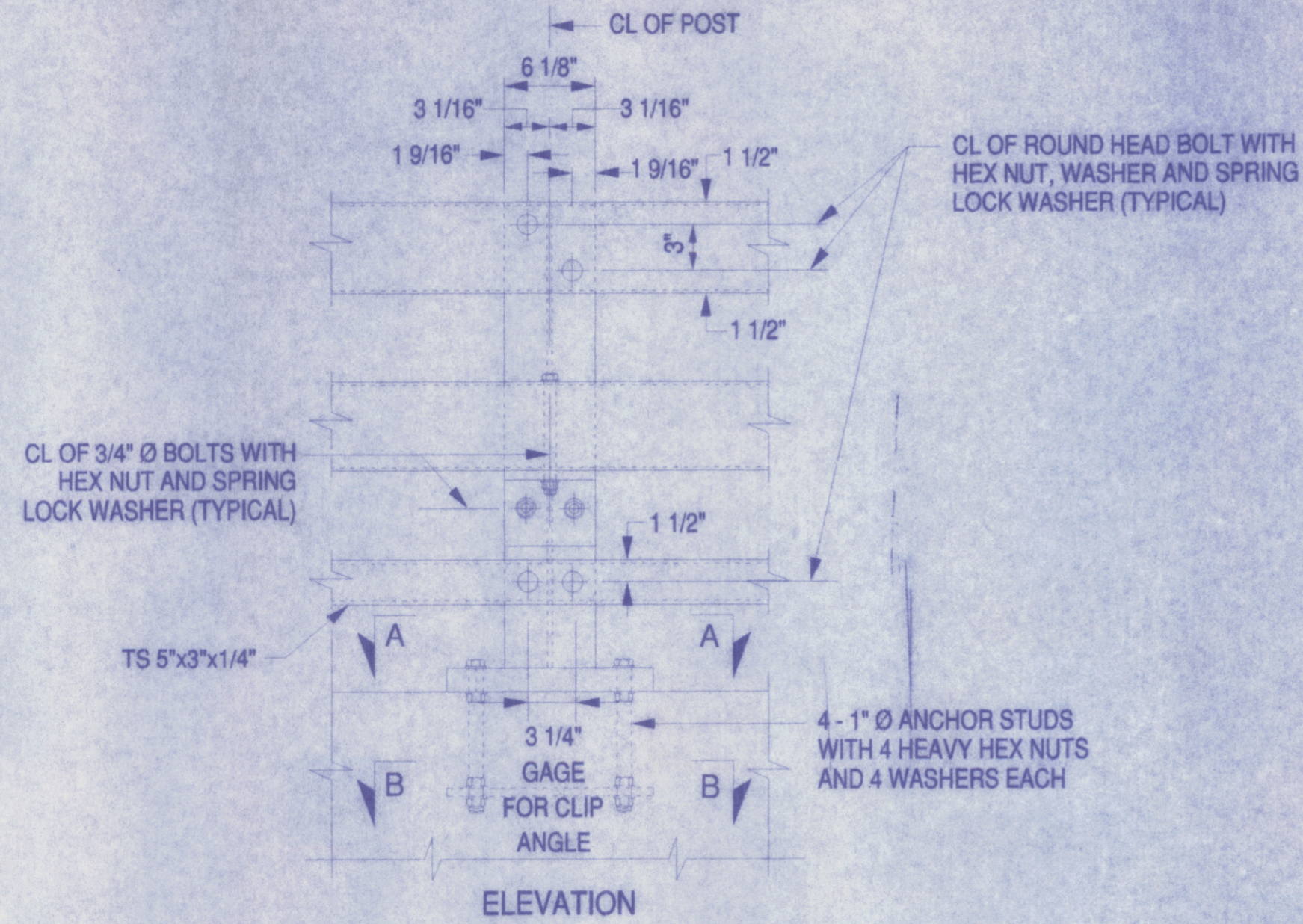
DESCRIPTION:
CONT. NO. BRO 1442 (27)
GEN. CONT. RENAUD BROTHERS, INC.
ERECTOR: RENAUD BROTHERS, INC.
FABRICATOR: PH. (315)736-8312
DI HIGHWAY SIGN & STRUCTURE CORPORATION
P.O. BOX 123140 GREENMAN AVE., NEW YORK MILLS, N.Y. 13417

JOB NO.
R15-03

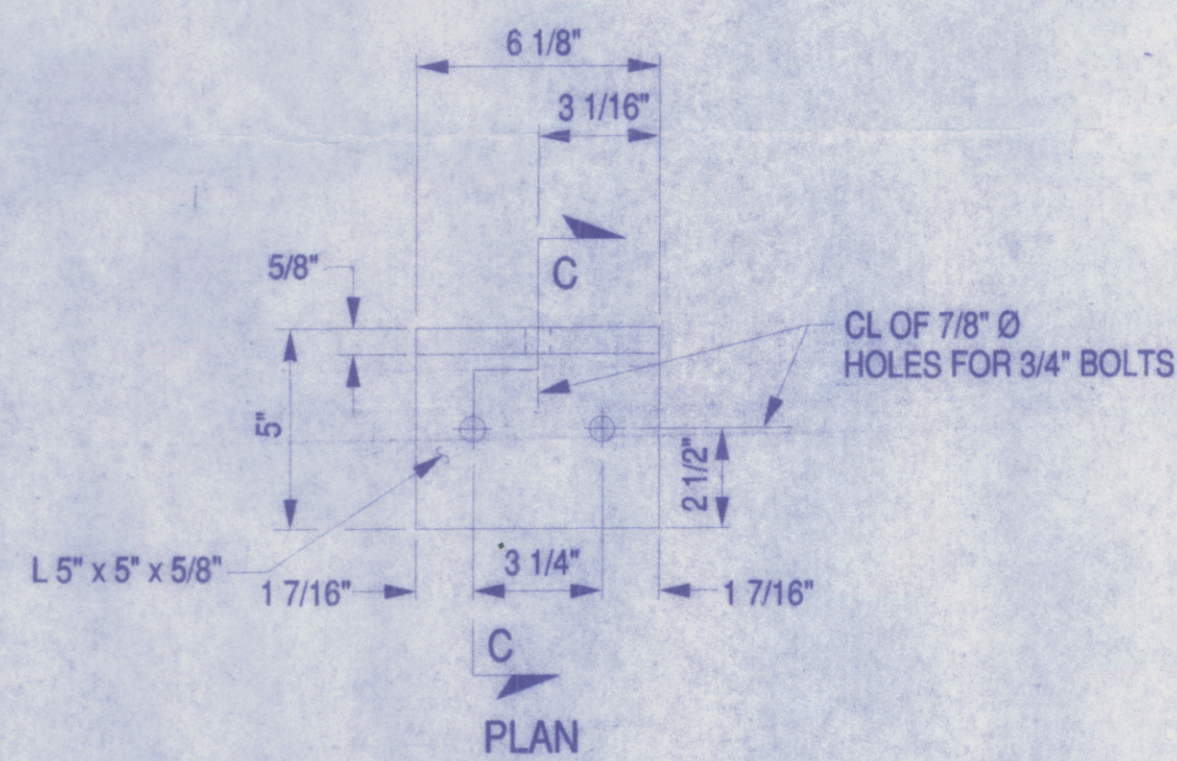
RECEIVED
CK'D BY JEL OK'D BY JAG
RES JAN 23 2010
RESUBMIT APPROVED
BY kmh DATE 3/9/10



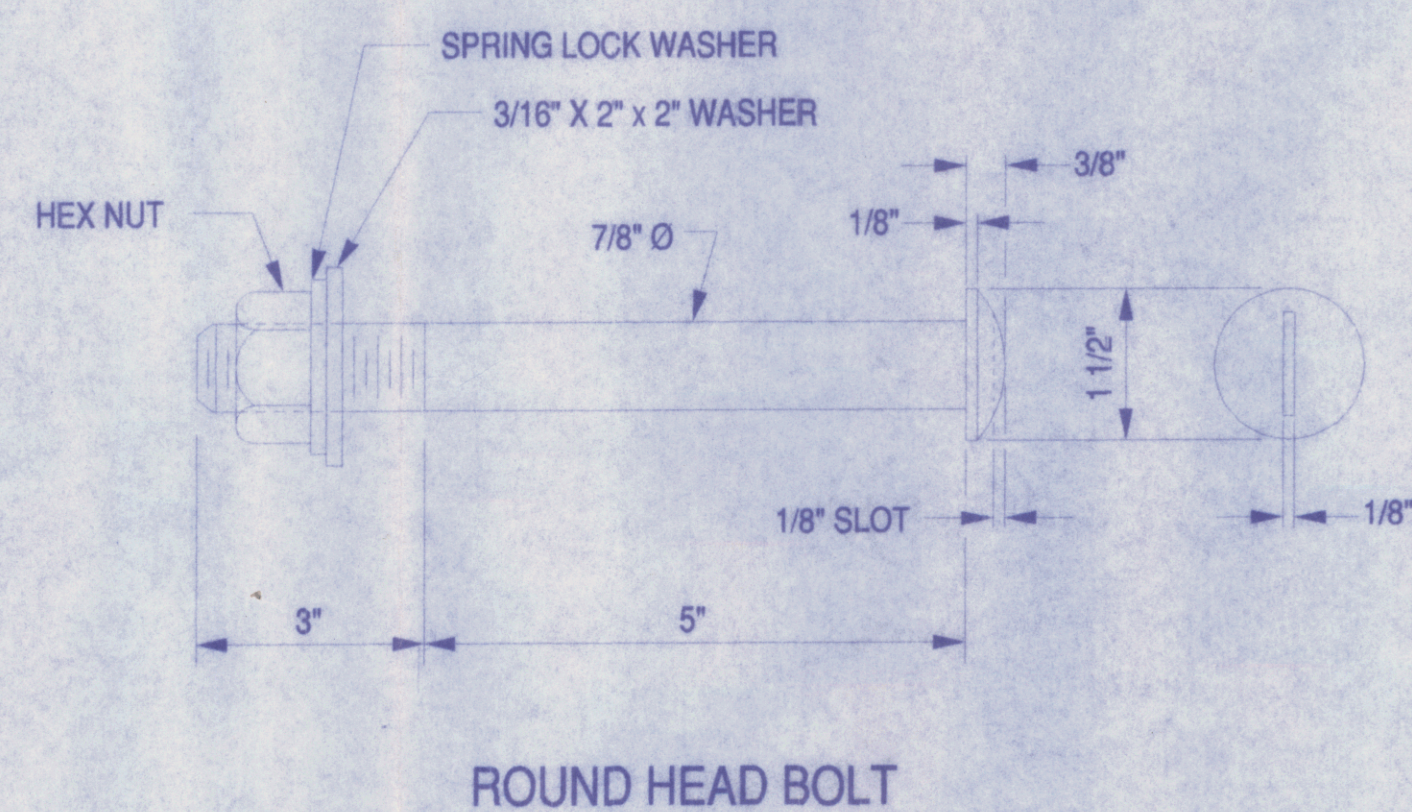
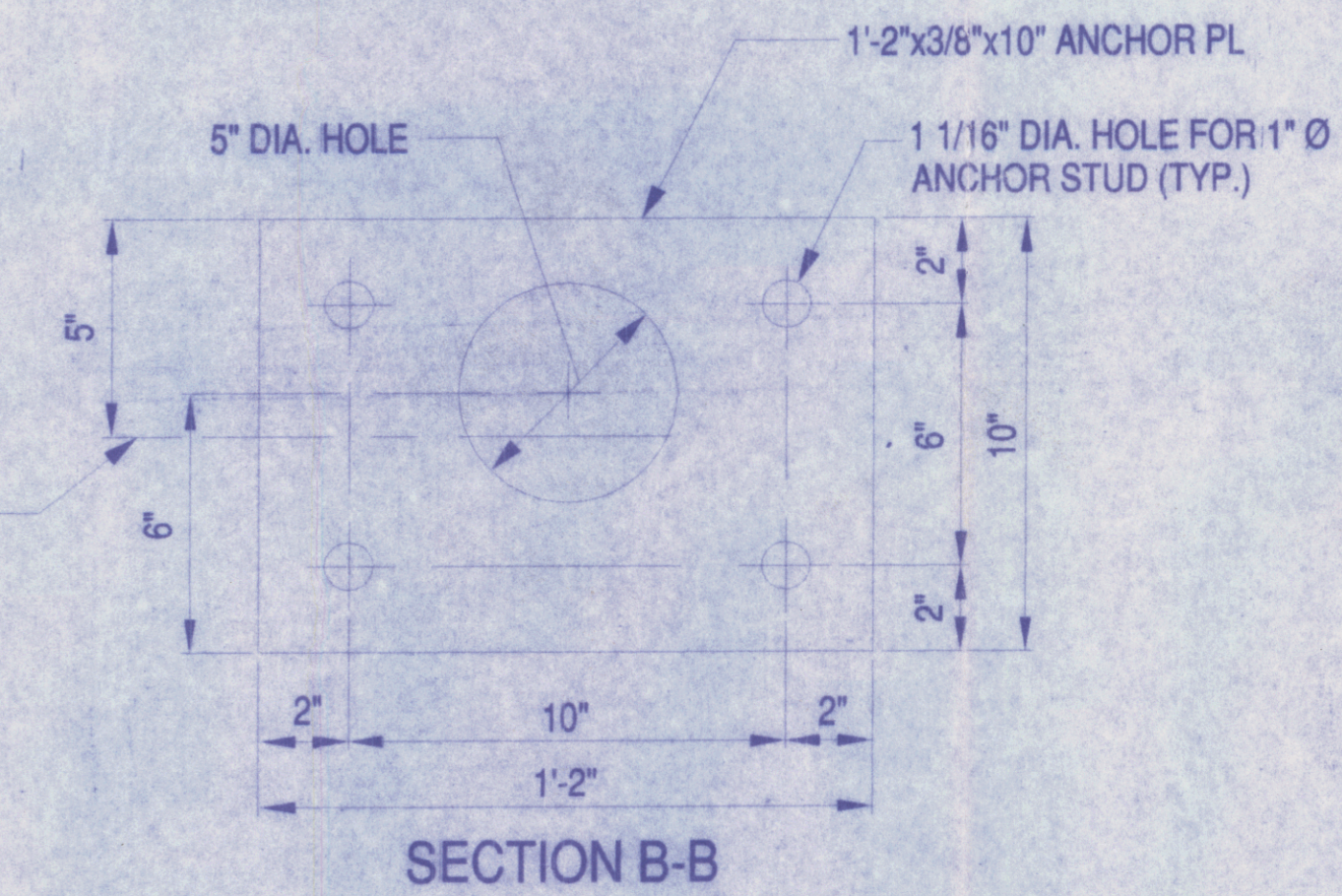
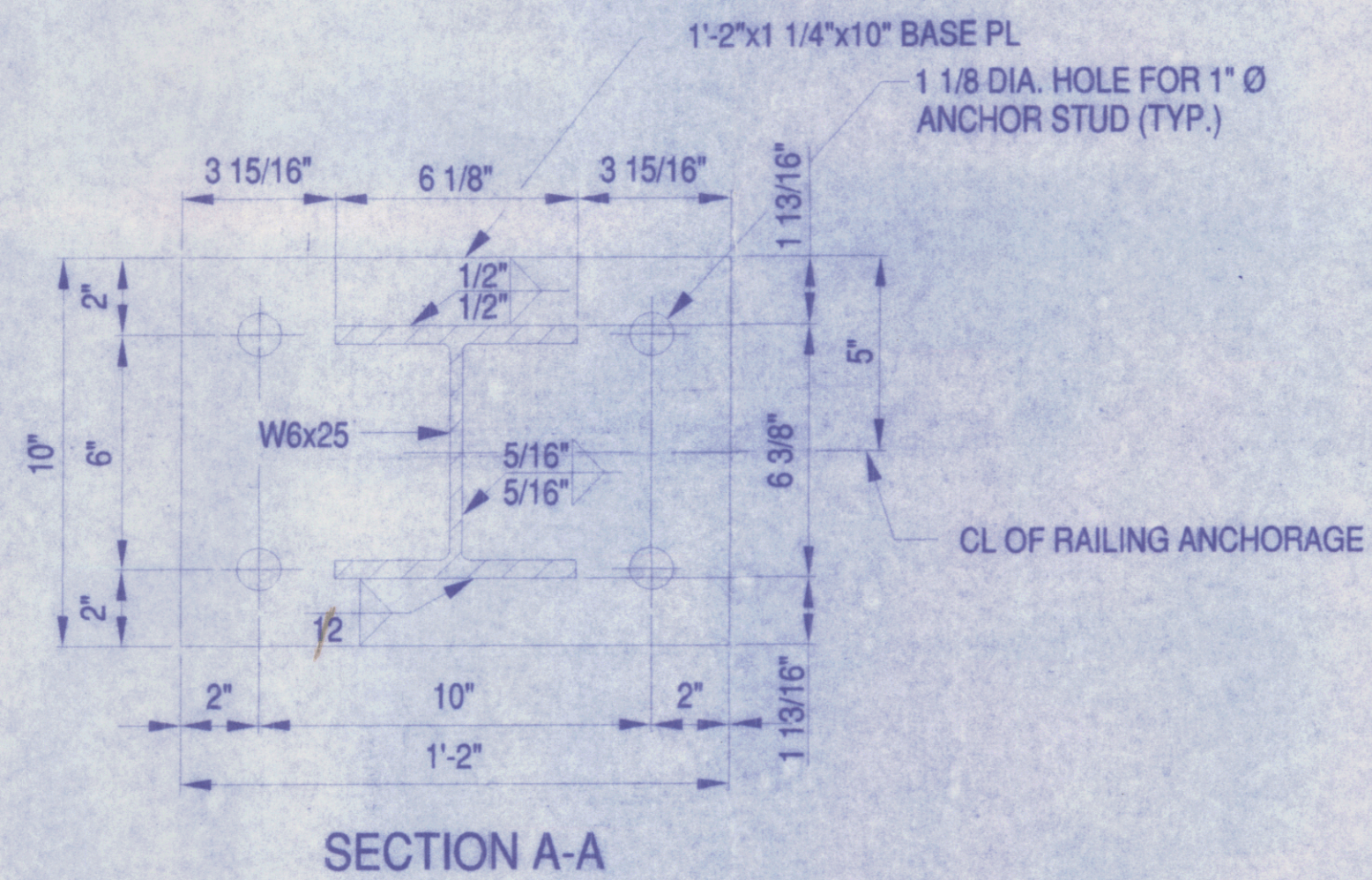
STEEL BRIDGE RAILING (THREE-RAIL - CURBLESS)



STEEL BRIDGE RAILING SPLICE DETAILS (THREE-RAIL - CURBLESS)



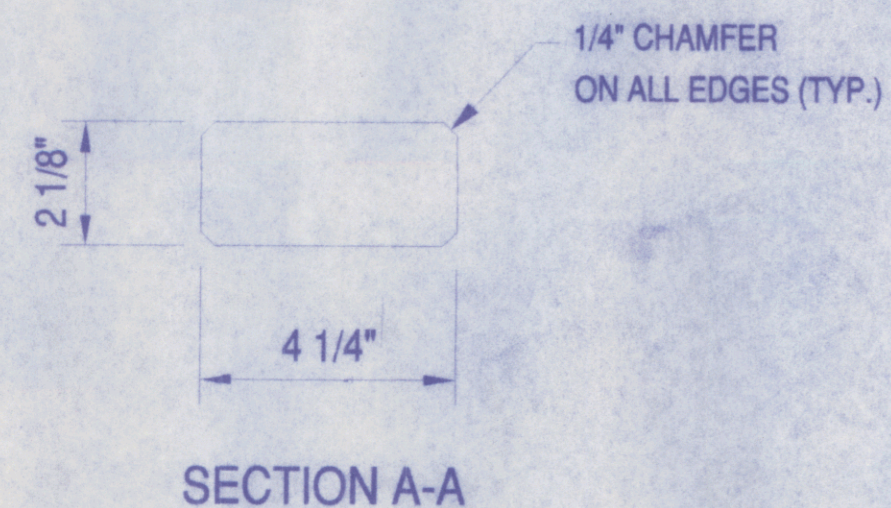
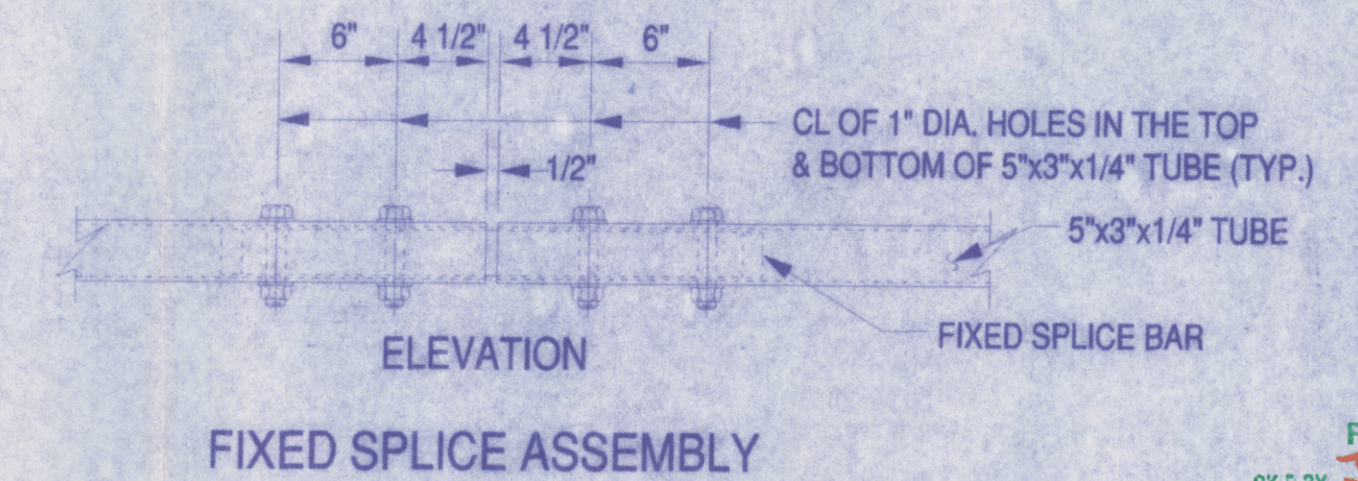
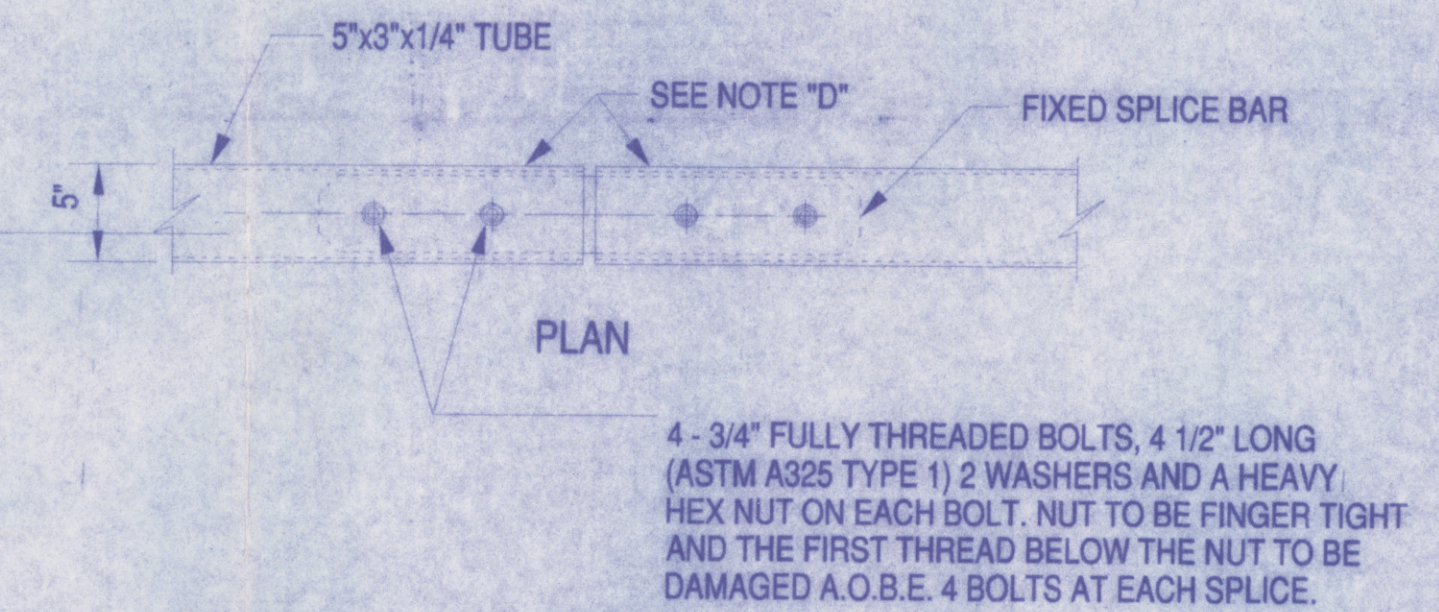
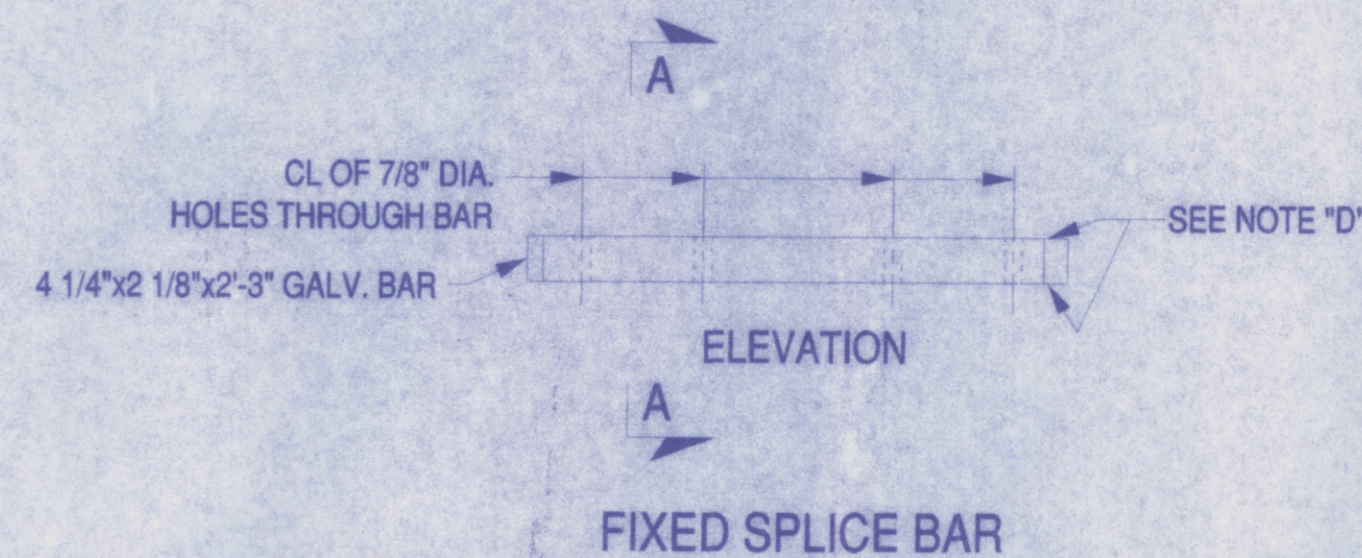
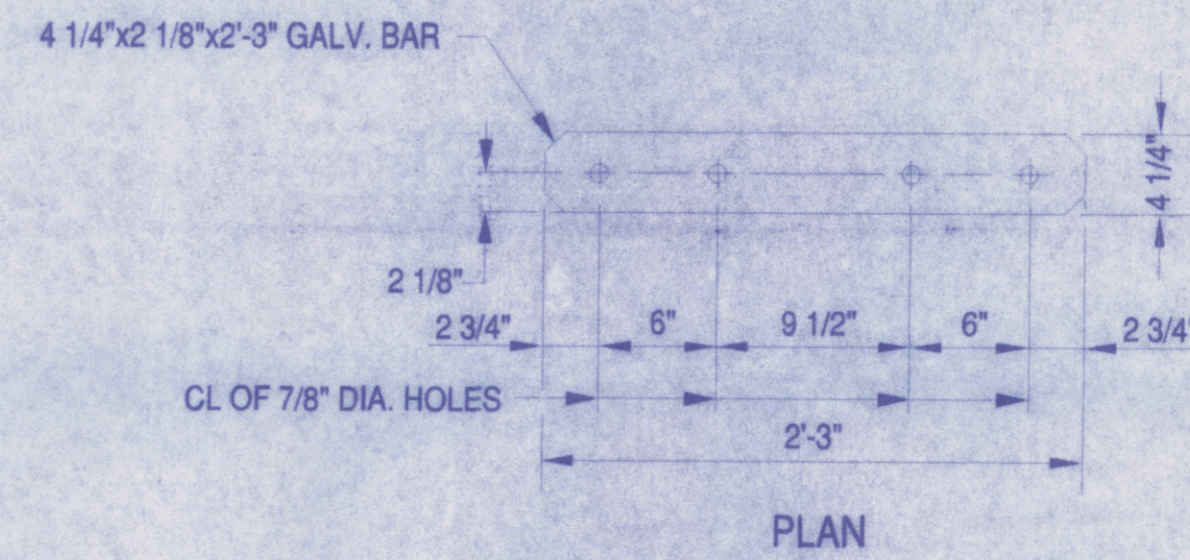
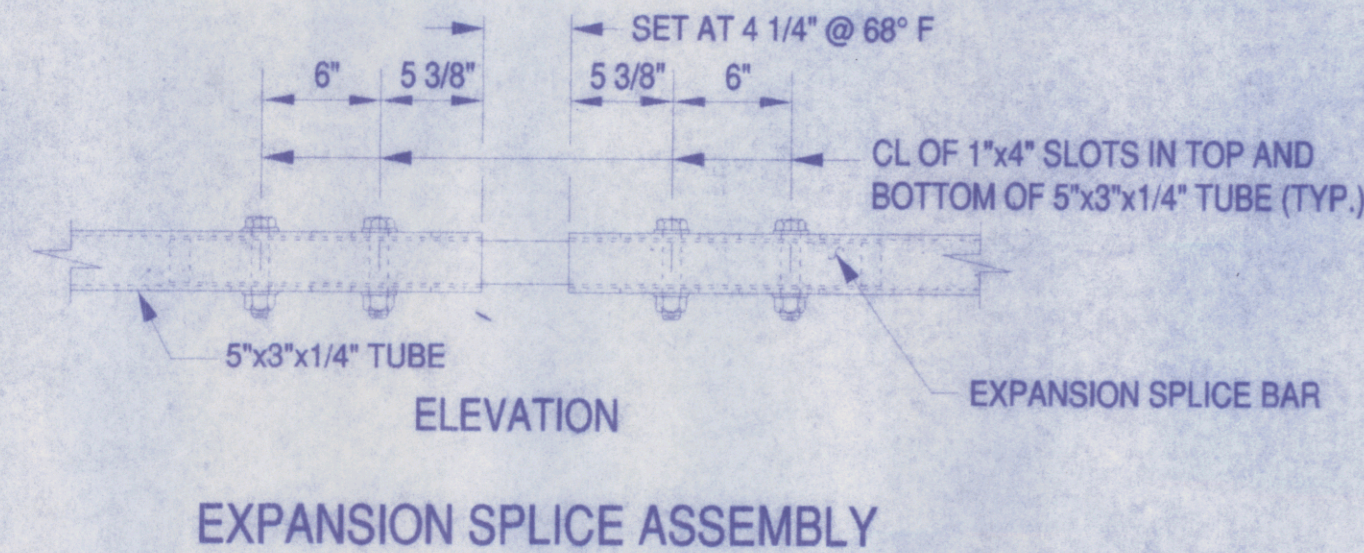
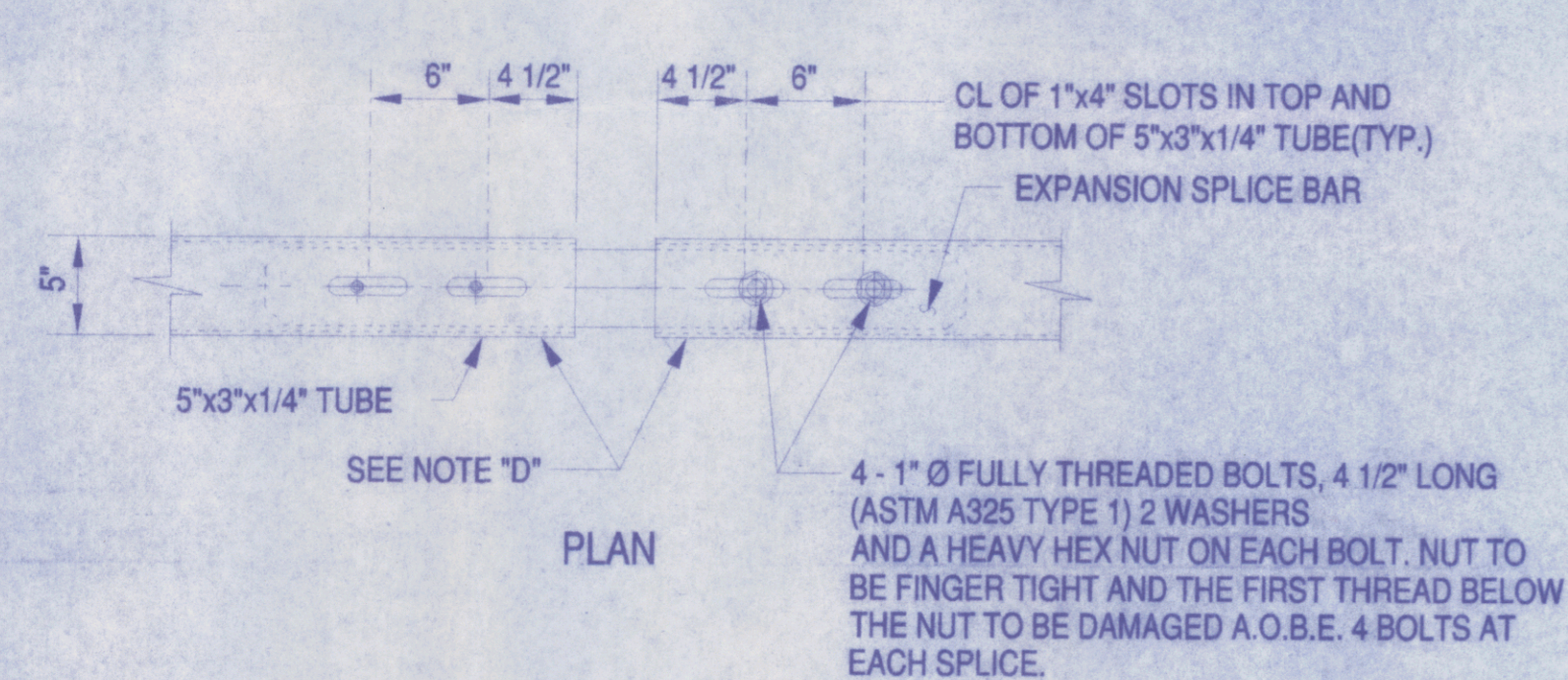
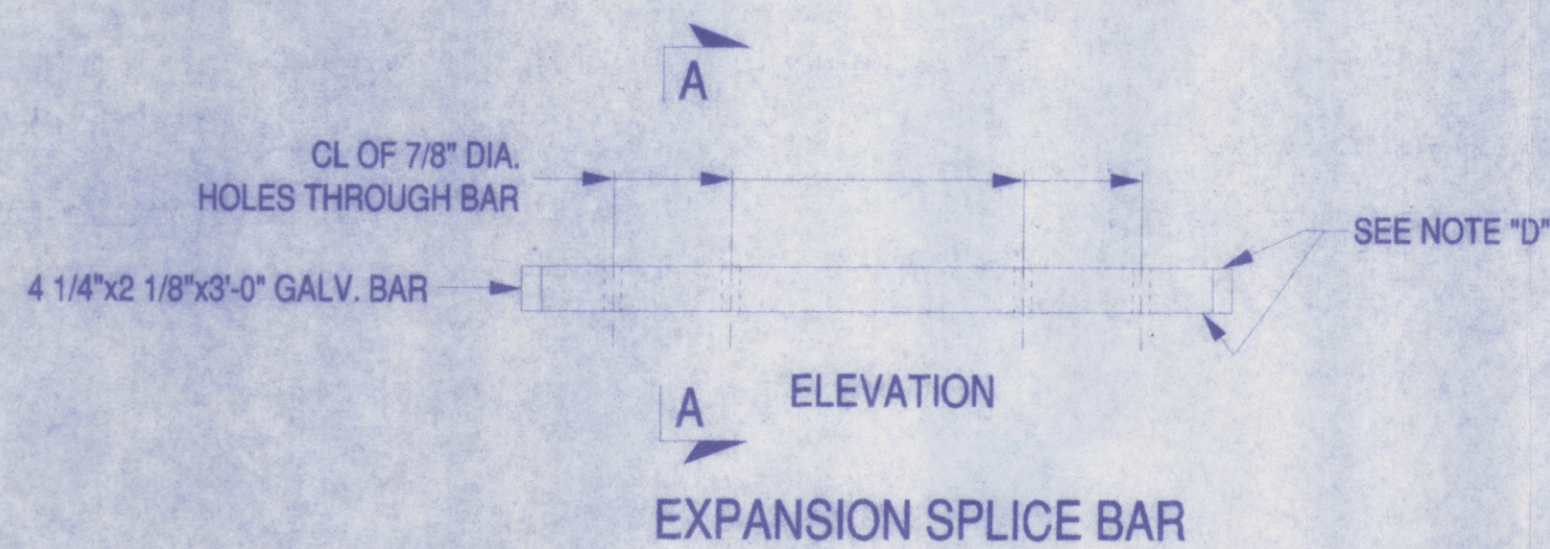
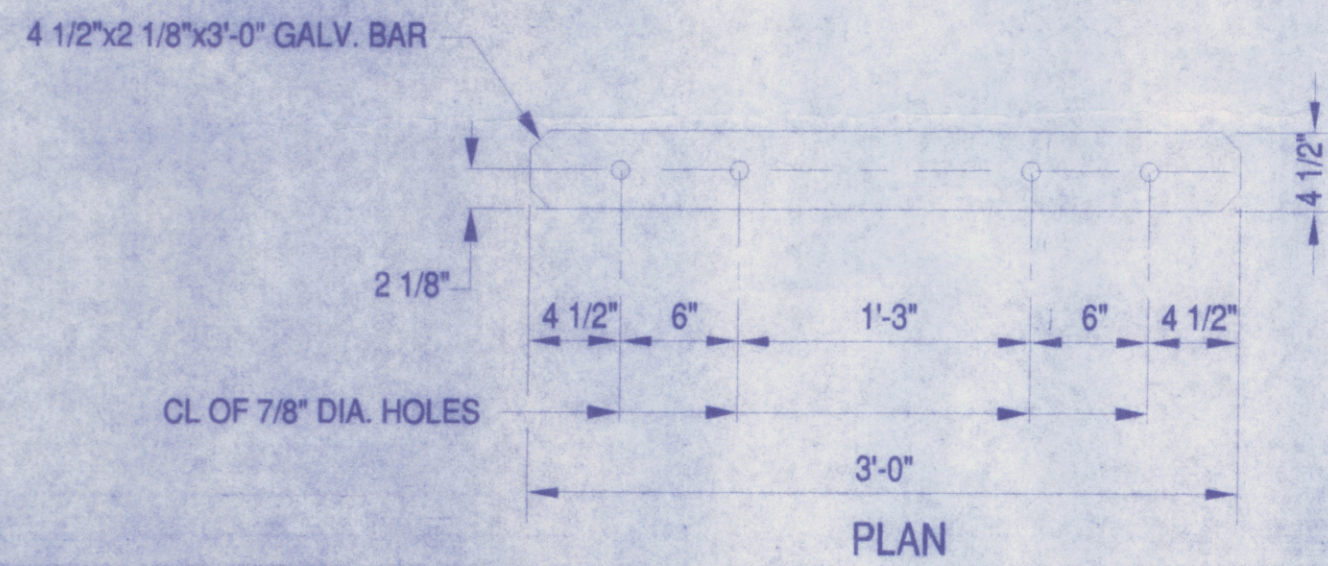
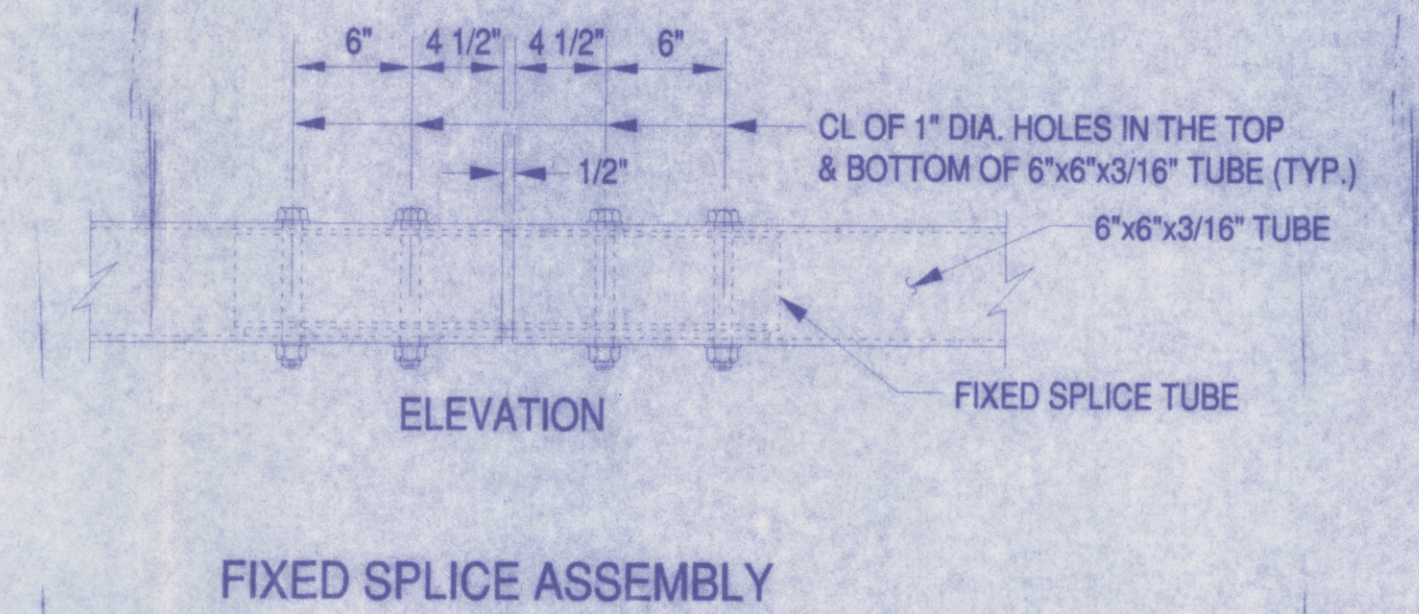
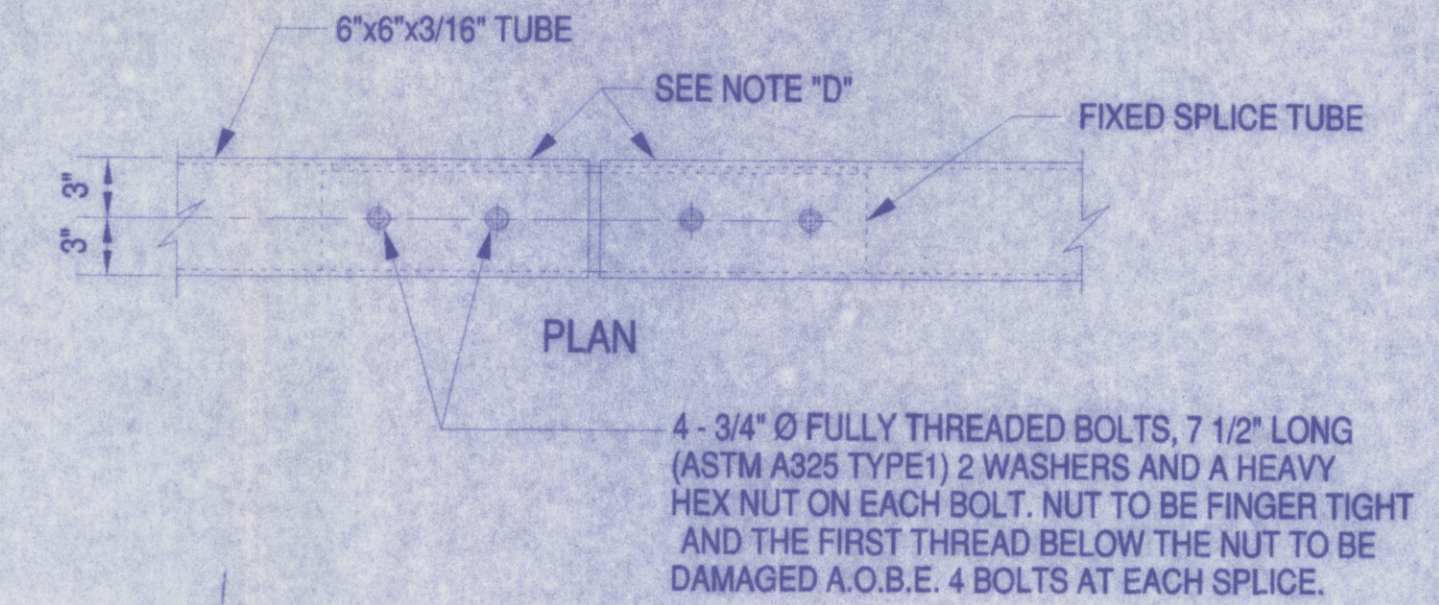
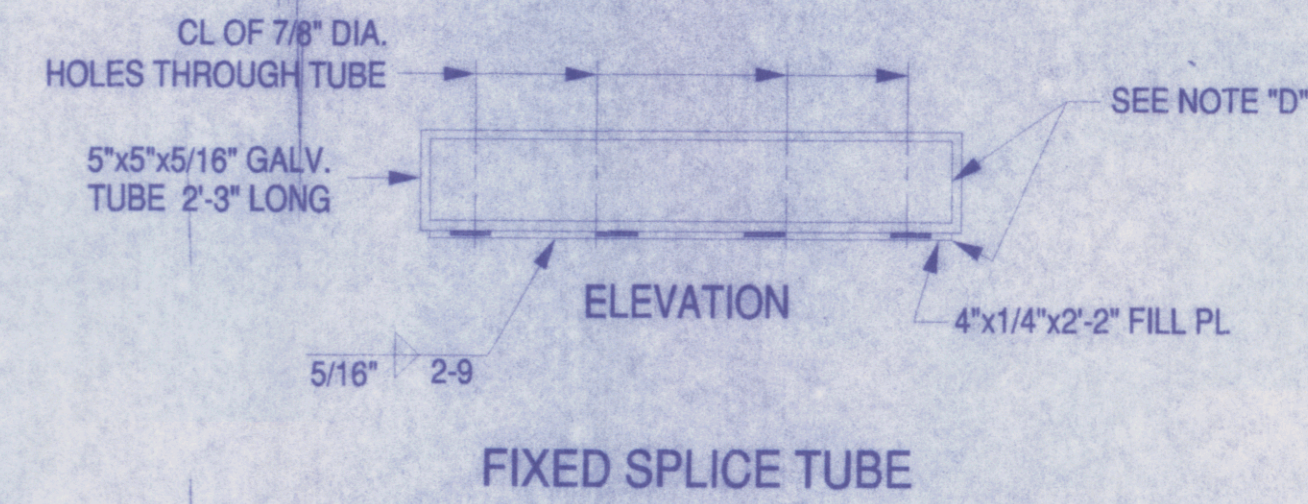
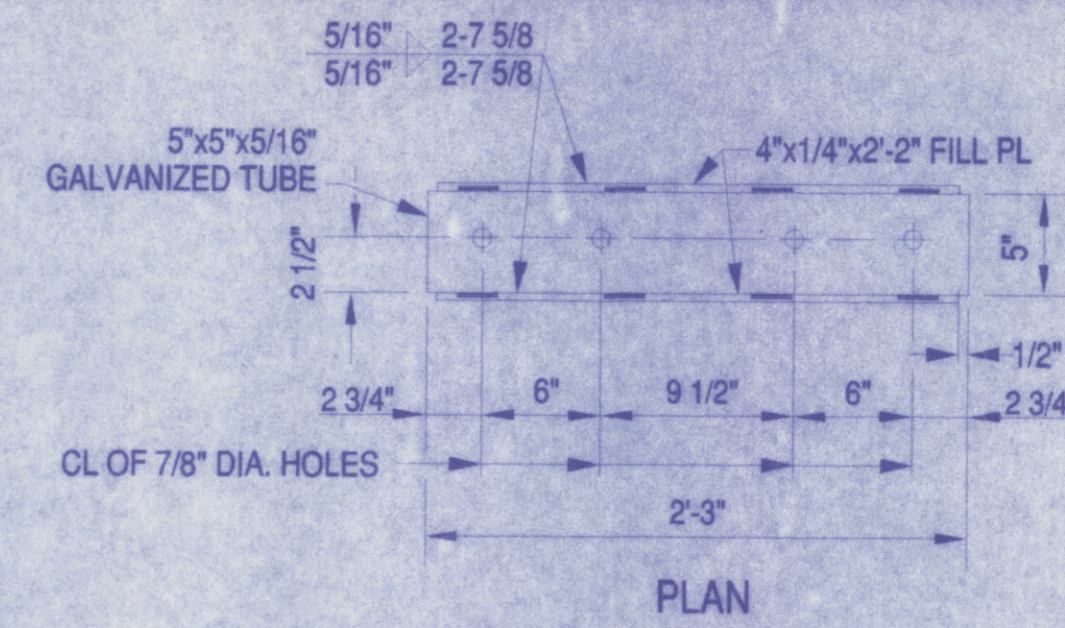
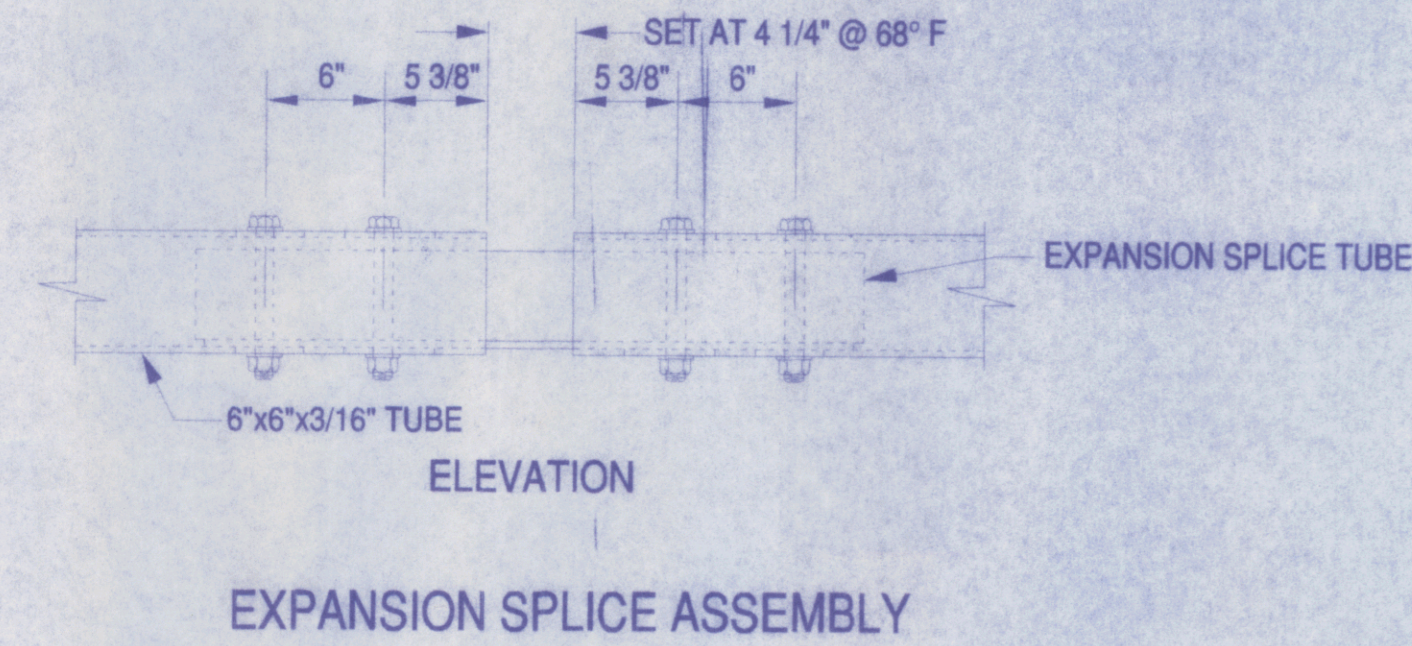
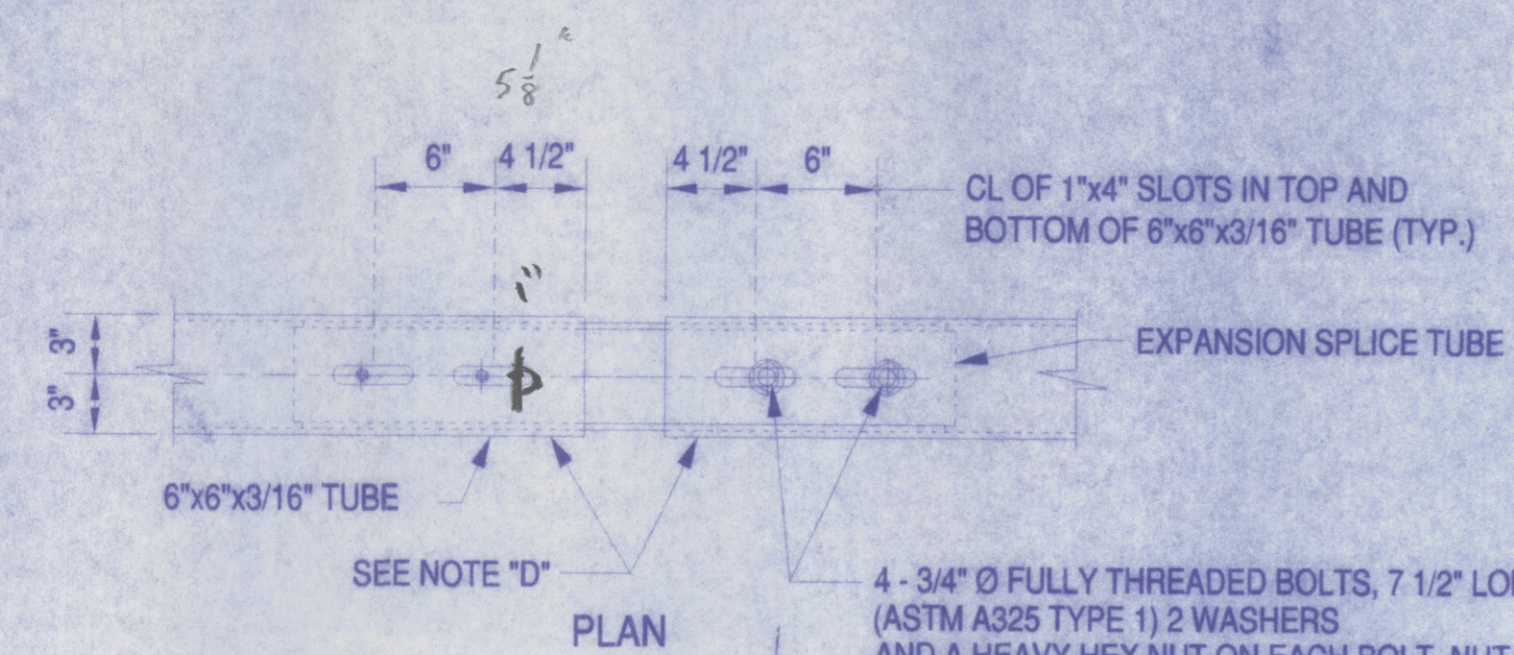
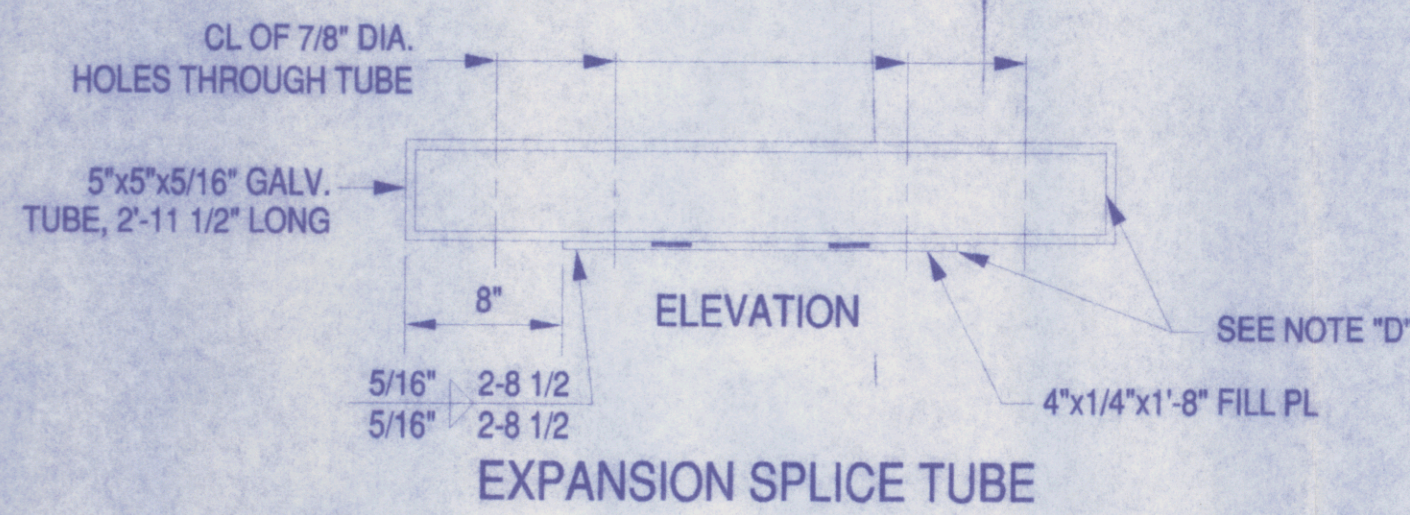
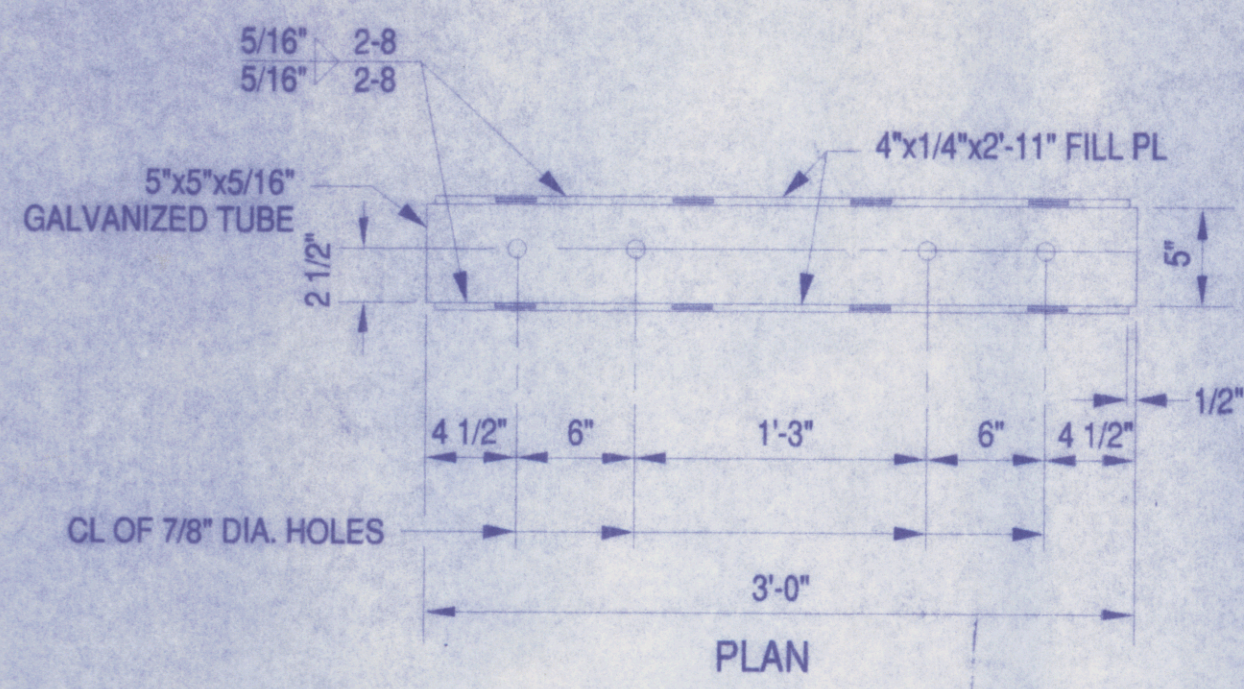
RAILING ANGLE DETAILS



RECEIVED
 CHK'D BY JEL OK'D BY JAG
 FEB JAN 23 2010
 RESUBMIT APPROVED
 BY KMH DATE 3/9/10

NOTES:
 PRIOR TO GALVANIZING THE ASSEMBLED POST, GRIND ALL EDGES TO A MINIMUM RADIUS OF 1/16".
 BOLTS SHALL BE TORQUED SNUG TIGHT (APPROXIMATELY 100 ft.-lb.).

| | | | | | |
|---|---------------|-------------------------|-----------------|--------------------|--------------------------|
| ADDED SHEET | DESCRIPTION: | DRAWN BY: ESB | DATE 1/27/10 | CHECKED BY: DCK | SHEET NO. 2 OF 3 |
| BRIDGE RAILING DETAILS | | | | | |
| STATE OF VERMONT AGENCY OF TRANSPORTATION HIGHWAY TH 43 (BR. 33) OVER WARDBORO BROOK IN THE TOWN OF JAMAICA IN WINDHAM COUNTY | | | | | |
| REV. 1 | DATE: 2/16/10 | CONT. NO. BRO 1442 (27) | | | |
| GEN. CONT. RENAUD BROTHERS, INC. | | | | | |
| ERECTOR: RENAUD BROTHERS, INC. | | | | | |
| FABRICATOR: PH. (315)736-8312 | | | | | |
| DI HIGHWAY SIGN & STRUCTURE CORPORATION | | | | | |
| P.O. BOX 123(40 GREENMAN AVE.) NEW YORK MILLS, N.Y. 13417 | | | | | |
| | | | | | JOB NO. R15-03 |



NOTES:

BOLTS SHALL BE TORQUED SNUG TIGHT (APPROXIMATELY 100 ft.-lb.).

NOTE *D*:
PROTRUSIONS CAUSED BY WELDING OR GALVANIZING ARE NOT PERMITTED ON THE ADJOINING SURFACES OF THE BOX BEAM RAILS, SPLICE TUBES AND FILL PLATES.

RECEIVED
 CK'D BY: JEL OK'D BY: JAG
 FEB 23 2010
 RESUBMIT APPROVED
 BY: KMH DATE: 3/9/10

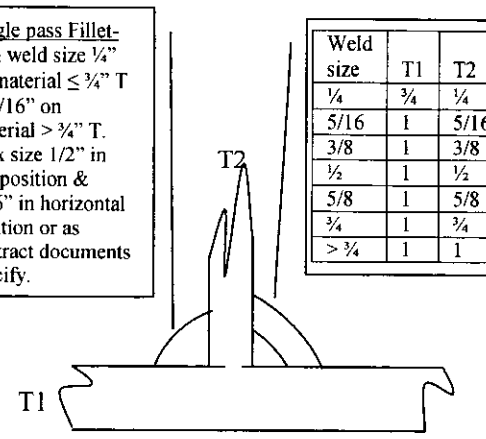
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|--|---|---------------|-----------------|------------------|
| REV. DATE: DESCRIPTION: | DRAWN BY: ESB | DATE: 2/15/10 | CHECKED BY: DCK | SHEET NO. 3 OF 3 |
| | BRIDGE RAILING DETAILS | | | |
| STATE OF VERMONT AGENCY OF TRANSPORTATION HIGHWAY TH 43 (BR. 33) OVER WARDSBORO BROOK IN THE TOWN OF JAMAICA IN WINDHAM COUNTY | | | | |
| 1 2/16/10 | CONT. NO. BRO 1442 (27) | | | |
| | GEN. CONT. RENAUD BROTHERS, INC. | | | |
| | ERECTOR: RENAUD BROTHERS, INC. | | | |
| | FABRICATOR: PH. (315)736-8312 | | | |
| | DI HIGHWAY SIGN & STRUCTURE CORPORATION | | | |
| | P.O. BOX 123/40 GREENMAN AVE NEW YORK MILLS, N.Y. 13417 | | | |
| | JOB NO. | | | R15-03 |

V_T
 June

WELDING PROCEDURE SPECIFICATION

MATERIAL SPECIFICATION A36, A572 Gr50, A53GR B, A252 GR 2, OR 3, 5LX52, A500 GR B
 WELDING PROCESS FCAW
 MANUAL, SEMIAUTOMATIC, AUTOMATIC SEMI-AUTOMATIC
 POSITION OF WELDING 1F & 2F (FLAT & HORIZONTAL)
 FILLER METAL SPECIFICATIONS AWS 5.20
 FILLER METAL CLASSIFICATION E71T-1
 ELECTRODE & MANUFACTURE Ultracore 71C (LINCOLN)
 FLUX & MANUFACTURE N/A
 SHIELDING GAS 100% CO2 DEW POINT -40°F FLOW RATE MIN 41 CFH MAX 56 CFH
 SINGLE OR MULTIPLE PASS SINGLE or MULTIPLE
 SINGLE OR MULTIPLE ARC SINGLE
 WELDING CURRENT DC POLARITY DCEP (REVERSE)
 WELDING PROGRESSION N/A
 ROOT TREATMENT CLEAN TO REMOVE ALL CONTAMINANT
 PREHEAT AND INTERPASS <3/4"=50°F, 3/4 TO 1 1/4"= 70°F, 1 1/4 TO 2 1/2"= 150°F >2 1/2"= 225°F
300°F MAX INTERPASS TEMP.
 POSTHEAT TREATMENT NONE

WELDING PROCEDURE

| PASS NO. | ELECTRODE SIZE | AMPS | VOLTS | TRAVEL SPEED IN/MIN | JOINT DETAIL |
|----------|----------------|---------|--------|---------------------|---|
| ALL | 1/16" | 300 | 27 | 11.6 | Miscellaneous Fillet Welds  |
| | | Max 330 | Max 29 | Max 12.7 | |
| | | Min 270 | Min 25 | Min 10.5 | |
| | | | | | |

Single pass Fillet:
 Min weld size 1/4"
 on material ≤ 1/4" T
 & 5/16" on
 material > 1/4" T.
 Max size 1/2" in
 flat position &
 5/16" in horizontal
 position or as
 contract documents
 specify.

| Weld size | T1 | T2 |
|-----------|-------|-------|
| 1/4 | 3/8 | 1/2 |
| 5/16 | 1 | 5/8 |
| 3/8 | 1 1/8 | 1 1/4 |
| 1/2 | 1 1/2 | 1 3/4 |
| 5/8 | 1 3/4 | 2 |
| 3/4 | 2 | 2 1/4 |

PROCEDURE NO: DI-03 FABRICATOR DI-HIGHWAY SIGN & STRUCTURE

OUR JOB NO. Stock fillet weld AUTHORIZED BY [Signature]

PQR REF NO. DI-01-09a DATE 11/28/10



JOEL W. SIMS
 CMI 94030071
 OCI EXP. 03/01/11

WELDING PROCEDURE SPECIFICATION

MATERIAL SPECIFICATION A572 GR 50
 WELDING PROCESS FCAW
 MANUAL, SEMIAUTOMATIC, AUTOMATIC SEMIAUTOMATIC
 POSITION OF WELDING 1F (FLAT)
 FILLER METAL SPECIFICATIONS AWS 5.20
 FILLER METAL CLASSIFICATION E71T-1
 ELECTRODE & MANUFACTURE Ultracore 71C (Lincoln)
 FLUX & MANUFACTURE N/A
 SHIELDING GAS 100% CO2 DEW POINT -40°F FLOW RATE MIN 41 CFH MAX 56 CFH
 SINGLE OR MULTIPLE PASS MULTIPLE
 SINGLE OR MULTIPLE ARC N/A
 WELDING CURRENT DC POLARITY DCEP (REVERSE)
 WELDING PROGRESSION N/A
 ROOT TREATMENT CLEAN TO REMOVE ALL CONTAMINANT
 PREHEAT AND INTERPASS 3/4 TO 1 1/2 = 70°F, 1 1/2 TO 2 1/2 = 150°F > 2 1/2 = 225°F
300°F MAX INTERPASS TEMP.
 POSTHEAT TREATMENT NONE

WELDING PROCEDURE

| PASS NO. | ELECTRODE SIZE | AMPS | VOLTS | TRAVEL SPEED IN/MIN | JOINT DETAIL |
|----------|----------------|---------|--------|---------------------|-------------------|
| ALL | 1/16" | 300 | 27 | 11.6 | Stock Bridge post |
| | | Max 330 | Max 29 | Max 12.7 | |
| | | Min 270 | Min 25 | Min 10.5 | |

Base plate 1" to 1-9/16" A572 Gr 50
 Illustrated in the horizontal position for clarity only welding to be completed in the flat position.

PROCEDURE NO. DI-04 FABRICATOR DI-HIGHWAY SIGN & STRUCTURE

OUR JOB NO. Stock Bridge Post AUTHORIZED BY [Signature]

PQR REF NO. DI-01-09a DATE 11/28/10



WELDING PROCEDURE SPECIFICATION

MATERIAL SPECIFICATION A36, A53GR B, A252 GR 2, OR 3, 5LX52, A500 GR B
 WELDING PROCESS FCAW
 MANUAL, SEMIAUTOMATIC, AUTOMATIC SEMIAUTOMATIC
 POSITION OF WELDING 1F (FLAT)
 FILLER METAL SPECIFICATIONS AWS 5.20
 FILLER METAL CLASSIFICATION E71T-1
 ELECTRODE & MANUFACTURE Ultracore 71C (Lincoln)
 FLUX & MANUFACTURE N/A
 SHIELDING GAS 100% CO2 DEW POINT -40°F FLOW RATE MIN 41 CFH MAX 56 CFH
 SINGLE OR MULTIPLE PASS SINGLE
 SINGLE OR MULTIPLE ARC SINGLE
 WELDING CURRENT DC POLARITY DCEP (REVERSE)
 WELDING PROGRESSION N/A
 ROOT TREATMENT CLEAN TO REMOVE ALL CONTAMINANT
 PREHEAT AND INTERPASS <3/4 = 50°F, 3/4 TO 1 1/2 = 70°F, 1 1/2 TO 2 1/2 = 150°F >2 1/2 = 225°F
300°F MAX INTERPASS TEMP.
 POSTHEAT TREATMENT NONE

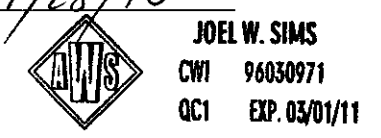
WELDING PROCEDURE

| PASS NO. | ELECTRODE SIZE | AMPS | VOLTS | TRAVEL SPEED IN/MIN | JOINT DETAIL |
|----------|----------------|---------|--------|---------------------|-------------------|
| 1 | 1/16 | 300 | 27 | 11.6 | 5 X 5 Tube splice |
| | | MAX 330 | MAX 29 | 12.7 TO 10.5 | |
| | | MIN 270 | MIN 25 | | |

PROCEDURE NO: DI-05 FABRICATOR DI-HIGHWAY SIGN & STRUCTURE

OUR JOB NO: Stock Tube splice for 6 X 6 bridge rail AUTHORIZED BY [Signature]

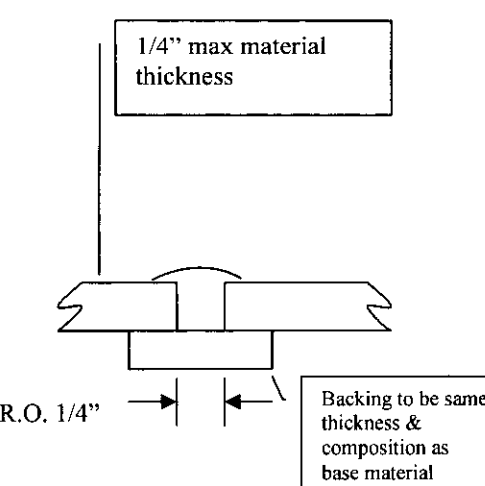
PQR REF NO: DI-01-09a DATE 1/28/10



WELDING PROCEDURE SPECIFICATION


MATERIAL SPECIFICATION A36, A53GR B, A252 GR 2, OR 3, 51X52, A500 GR B
 WELDING PROCESS FCAW
 MANUAL, SEMIAUTOMATIC, AUTOMATIC SEMIAUTOMATIC
 POSITION OF WELDING FLAT
 FILLER METAL SPECIFICATIONS AWS 5.20
 FILLER METAL CLASSIFICATION E71T-1
 ELECTRODE & MANUFACTURE Ultracore 71C (Lincoln)
 FLUX & MANUFACTURE N/A
 SHIELDING GAS 100%CO2 DEW POINT -40°F FLOW RATE MIN 41 CFH MAX 56 CFH
 SINGLE OR MULTIPLE PASS SINGLE
 SINGLE OR MULTIPLE ARC SINGLE
 WELDING CURRENT DC POLARITY DCEP (REVERSE)
 WELDING PROGRESSION N/A
 ROOT TREATMENT CLEAN TO REMOVE ALL CONTAMINANT
 PREHEAT AND INTERPASS <3/4=50°F, 3/4 TO 1 1/2 = 70°F, 1 1/2 TO 2 1/2 = 150°F >2 1/2 = 225°F
300°F MAX INTERPASS TEMP.
 POSTHEAT TREATMENT NONE

WELDING PROCEDURE

| PASS NO. | ELECTRODE SIZE | AMPS | VOLTS | TRAVEL SPEED IN/MIN | JOINT DETAIL |
|----------|----------------|--------------------|------------------|---------------------|---|
| | | | | | |
| 1 | 1/16 | 300 | 27 | 11.6 | Used for 6 X 6 x 3/16 guide rail 5 X 3 X 1/4 bridge rail 3 X 3 X 3/16 pedestrian rail  |
| | | MAX 330 MIN 270 | MAX 29 MIN 25 | 12.7 TO 10.5 | |

PROCEDURE NO. DI-06 FABRICATOR DI-HIGHWAY SIGN & STRUCTURE

OUR JOB NO. Stock bridge rail & guide rail AUTHORIZED BY 

PQR REF NO. DI-01-09a DATE 1/2/2010 

REEL W. SHAS
 CRN 9602971
 QCS 09.04.01.11