

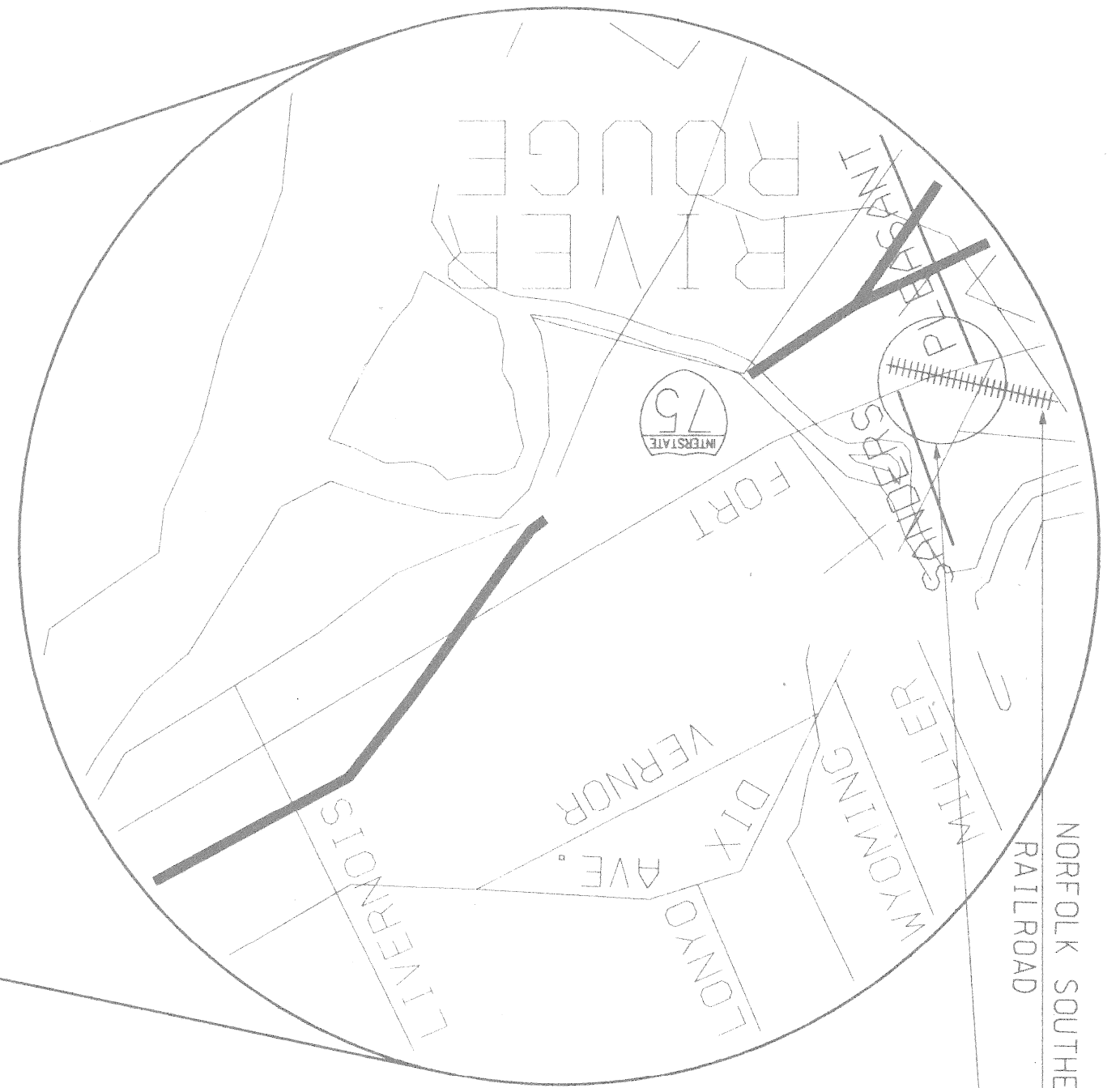
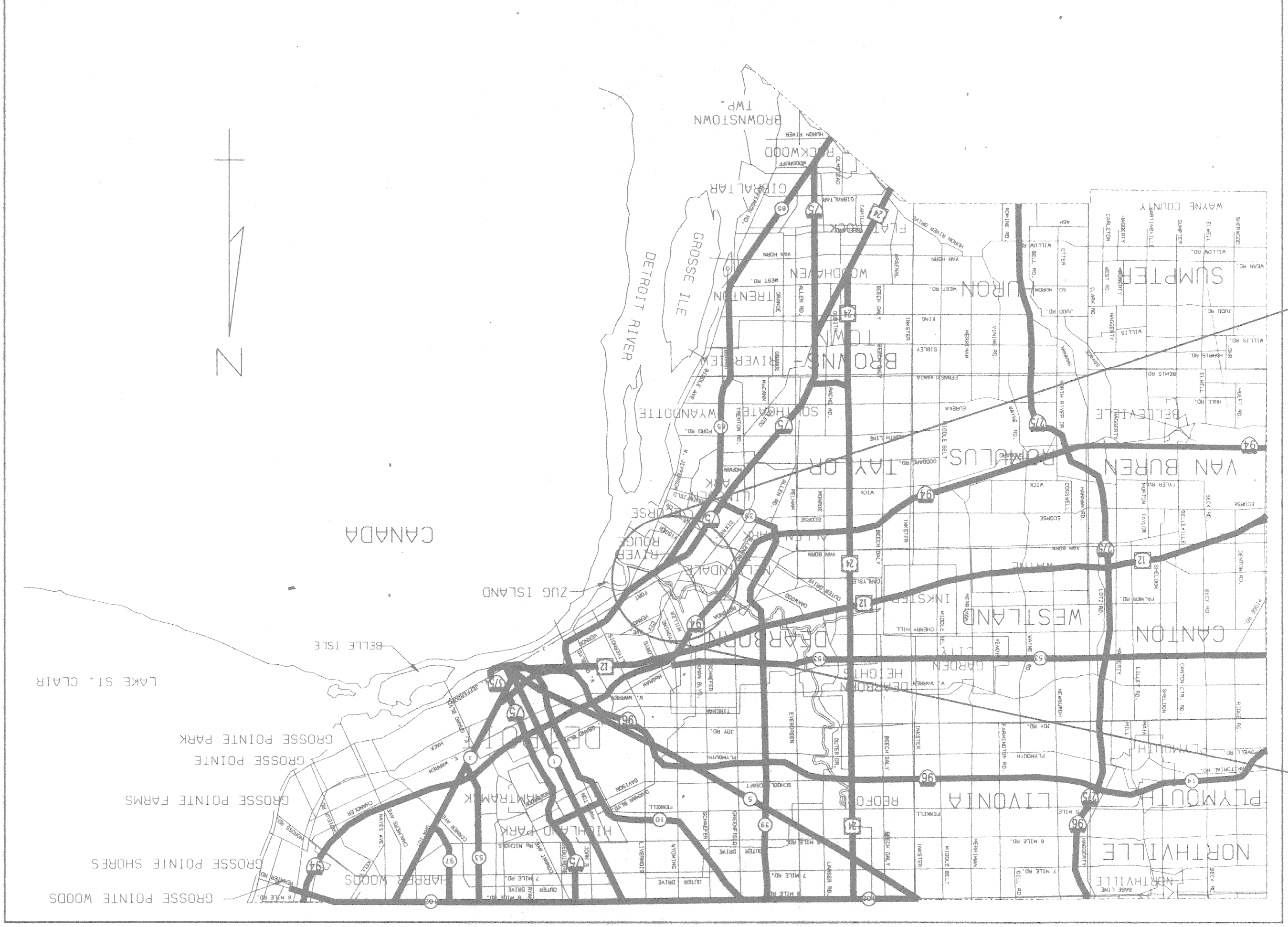
|                            |       |
|----------------------------|-------|
| PLANS                      | 1     |
| TITLE SHEET                | 2-4   |
| GENERAL PLAN OF SITE       | 5-8   |
| LOG OF BORINGS             | 9     |
| EXISTING PLAN OF STRUCTURE | 10-12 |
| MISCELLANEOUS DETAILS      | 13    |

CITY OF DETROIT  
 DENNIS W. ARCHER-MAYOR  
 CITY ENGINEERING DIVISION  
 DEPARTMENT OF PUBLIC WORKS  
 PRELIMINARY PLANS FOR PROPOSED

REPLACEMENT OF FORT STREET BRIDGE OVER PLEASANT  
 AVE., SANDERS AVE., AND NORFOLK SOUTHERN/CONRAIL RAILROAD

|                    |              |                           |             |
|--------------------|--------------|---------------------------|-------------|
| STRUCTURE LOCATION | PLEASANT AVE | NORFOLK SOUTHERN RAILROAD | SANDERS AVE |
| STRUCTURE NUMBER   | 12712        | 12347                     | 12731       |

NOTES:  
 THE DESIGN OF THIS STRUCTURE IS BASED ON CURRENT ASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES MS18 LOADING. LIVE LOAD PLUS IMPACT DEFLECTION DOES NOT EXCEED 1/1000 OF THE SPAN LENGTH. THE LOAD FACTOR METHOD OF DESIGN WAS USED FOR THIS STRUCTURE.  
 EXCEPT WHERE OTHERWISE INDICATED ON THESE PLANS CONTAINED HEREIN, ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION 1996 EDITION.  
 THE STATIONING AS SHOWN ON THESE PLANS FOR THE INTERSECTION OF THE CENTERLINE OF BRIDGE AND ROADWAY CENTERLINE IS BELIEVED TO BE CORRECT. IT SHALL, HOWEVER, BE CHECKED AT THE TIME OF STARTING CONSTRUCTION, AND IF THE STATIONING SHOWN ON THESE PLANS IS INCORRECT, IT SHALL BE REPORTED TO THE DESIGN OFFICE, AND THE STRUCTURE SHALL BE STAKED OUT USING THE ACTUAL INTERSECTION OF THE CENTERLINE OF THE BRIDGE AND ROADWAY CENTERLINE AS THE CONTROL POINT.  
 ALL EXPOSED CONCRETE CORNERS SHOWN SQUARE ON THE PLANS SHALL BE BEVELED WITH 13 mm TRIANGULAR MOLDINGS EXCEPT AS OTHERWISE NOTED.  
 THE DESIGN OF THE STRUCTURAL MEMBERS IS BASED ON MATERIAL OF THE FOLLOWING GRADES AND STRESSES:  
 CONCRETE: GRADE S2 f'c = 21 MPa  
 CONCRETE: GRADE D f'c = 28 MPa  
 STEEL REINFORCEMENT: STIRRUPS f'y = 400 MPa  
 FOR PRESTRESSED BEAMS f'y = 300 MPa  
 PRESTRESSED CONCRETE f'c = 35 MPa  
 PRESTRESSING STRANDS f's = 1860 MPa



DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN. ELEVATIONS, COORDINATES, CURVE AND ALIGNMENT DATA ARE IN METERS. STATIONS ARE IN KILOMETERS + METERS.

|   |      |                                |      |
|---|------|--------------------------------|------|
| PROJECT: REMOVAL AND REPLACEMENT OF THE STRUCTURES AT FORT STREET BRIDGE OVER SANDERS AVE., NORFOLK SOUTHERN R.R. AND PLEASANT AVE. |      | CONTRACT NO.                   |      |
| PLANS PREPARED BY<br>SNELL ENVIRONMENTAL GROUP, INC.  |      | CITY ENGINEERING DIVISION      |      |
| RECOMMENDED FOR APPROVAL  | DATE | STRUCTURAL ENGINEER            | DATE |
| RECOMMENDED FOR APPROVAL  | DATE | BUILDINGS AND BRIDGES ENGINEER | DATE |
| APPROVED  | DATE | HEAD ENGINEER                  | DATE |
| APPROVED  | DATE | CITY ENGINEER                  | DATE |
| DATE  |      | DRWG. NO.                      | DATE |
| SCALE NOT TO SCALE  |      | TITLE SHEET                    |      |
| PROJECT NO. 9641-5160-06  |      | SHEET NO. 1 OF 13              |      |

|                     |      |   |   |
|---------------------|------|---|---|
| DESIGN BY<br>N.G.H. | 4-99 | <p>SNELL ENVIRONMENTAL GROUP, INC. A DLZ COMPANY<br/>         151 W. CONGRESS, SUITE 328<br/>         DETROIT, MICHIGAN 48226<br/>         TELEPHONE (313) 961-4040<br/>         Making it better for you</p> | <p>CITY OF DETROIT<br/>         MICHIGAN<br/>         FORT STREET BRIDGE OVER SANDERS AND CONRAIL RAILROADS<br/>         AND PLEASANT AVENUES AND NORFOLK</p> |
| DR'N BY<br>E.W.O.   | 4-99 |   |   |
| CK'D BY<br>R.G.W.   | 4-99 |   |   |
| APP'D BY            | 4-99 | REVISIONS   |   |



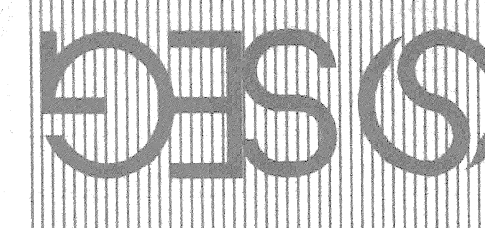
72 HOURS  
 BEFORE YOU DIG  
 CALL MISS DIG  
 800-482-7171  
 (TOLL-FREE)







|               |        |      |
|---------------|--------|------|
| APP'D BY      | N.G.H. | 4-99 |
| DR'N BY       | E.W.O. | 4-99 |
| CK'D BY       | R.G.W. | 4-99 |
| FINAL CK'D BY |        | 4-99 |



SNELL ENVIRONMENTAL GROUP, INC. A DLZ Company  
 151 W. CONGRESS, SUITE 328  
 DETROIT, MICHIGAN 48226  
 TELEPHONE (313) 961-4040  
 Making it better for you

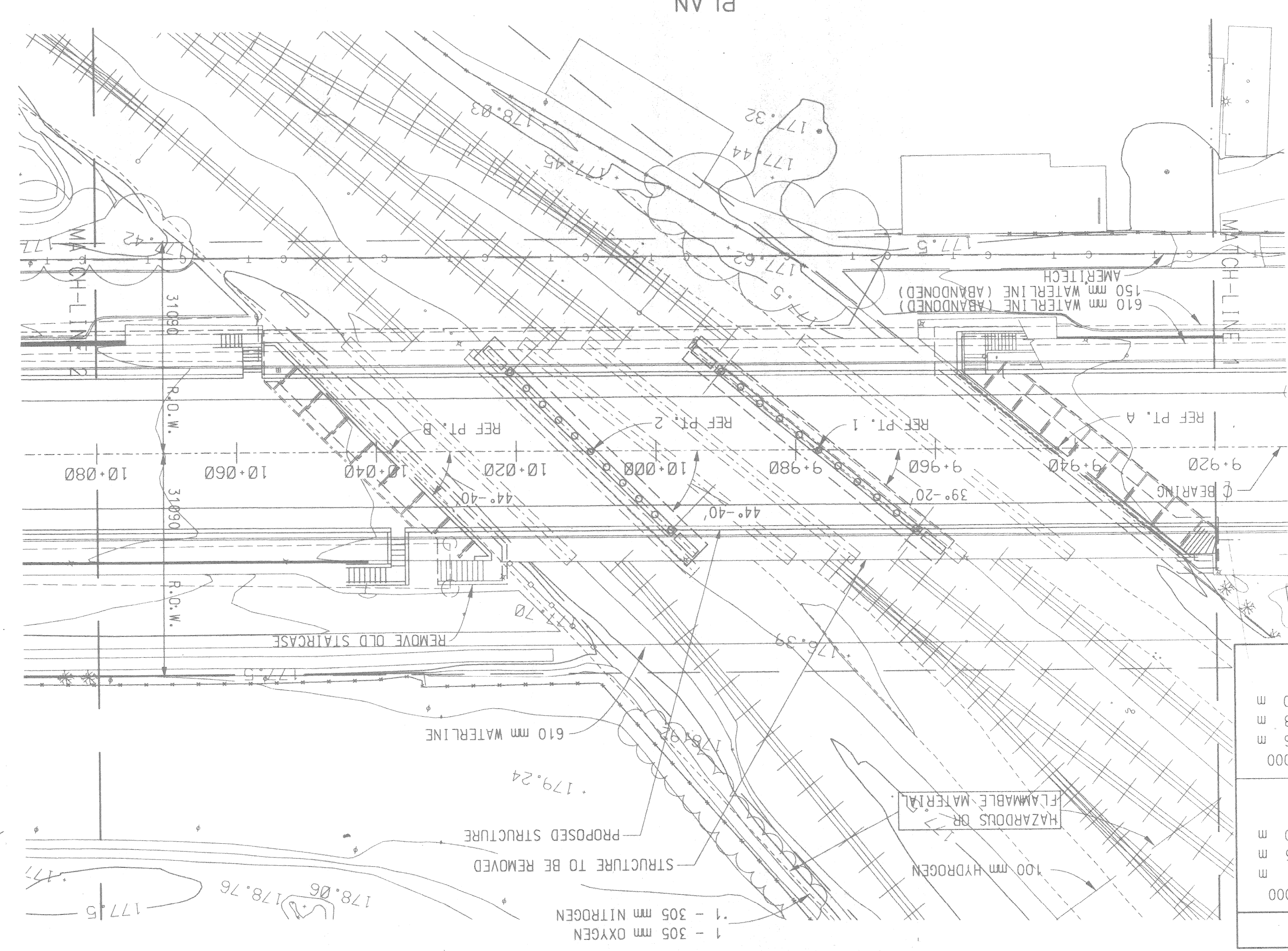
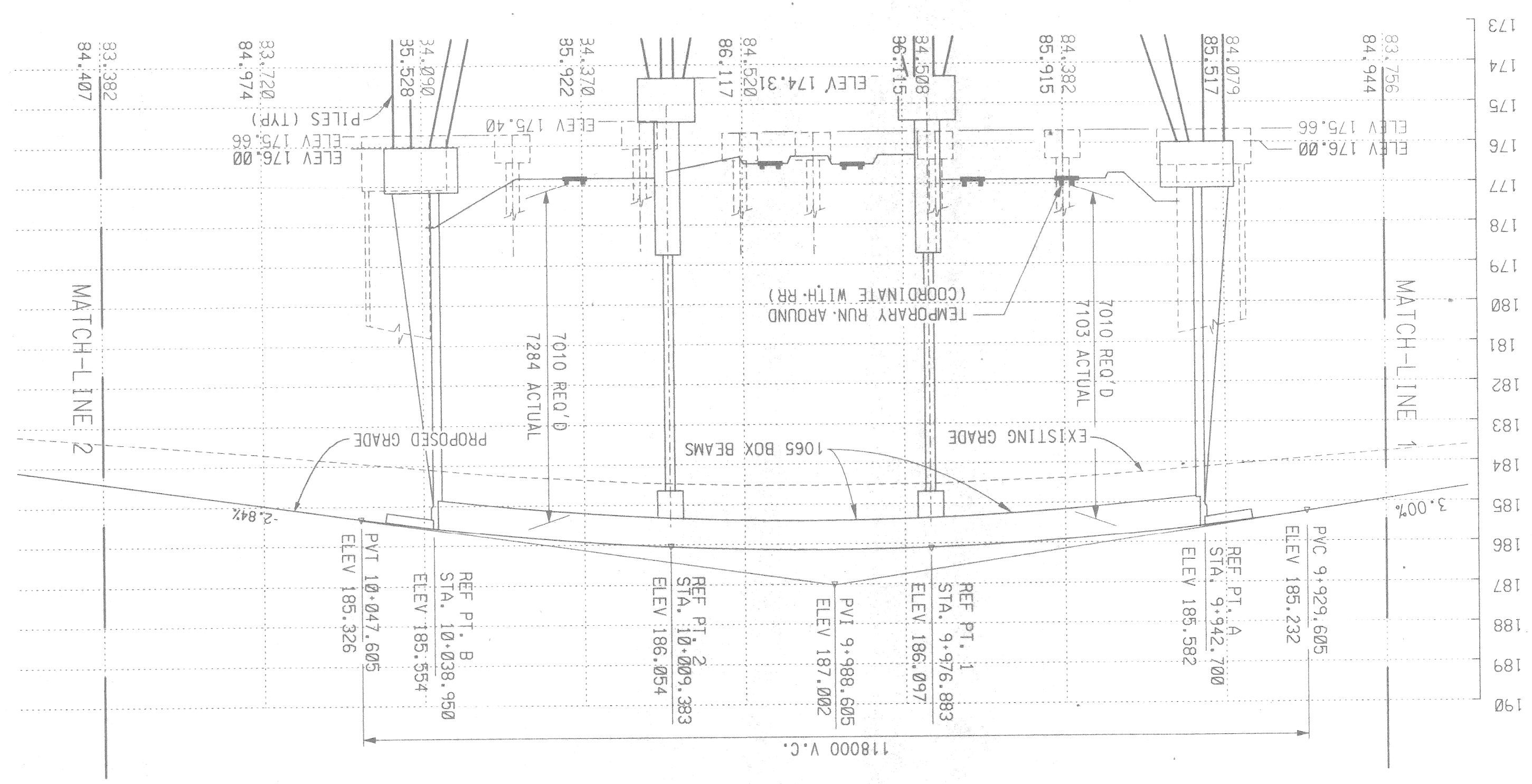
CITY OF DETROIT  
 AND PLEASANT AVENUES AND NORFOLK  
 AND CONRAIL RAILROADS

GENERAL PLAN OF SITE  
 PROJECT NO. 9641-5160-06  
 SHEET NO. 3 OF 13

DRWG. NO.  
 SCALE NOT TO SCALE

METRIC  
 DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN. ELEVATIONS, COORDINATES, CURVE AND ALIGNMENT DATA ARE IN METERS. STATIONS ARE IN KILOMETERS + METERS.

PROFILE ALONG FORT STREET  
 OVER NORFOLK SOUTHERN RAILROAD



|   |
|---|
| AMERITECH<br>4000 ALLEN RD., ROOM 101<br>ALLEN PARK, MI 48101<br>ATTN.: E. REDMER/SUE WHITE<br>PHONE NO.: (248) 456-0860                            |
| DETROIT EDISON<br>1880 STARBATT DRIVE<br>ROCHESTER HILLS, MI 48309<br>ATTN.: LEON JOHNSON<br>PHONE NO.: (248) 299-9411                              |
| MICHIGAN<br>3200 HOBSON<br>DETROIT, MI 48201<br>ATTN.: PAUL HARTMAN<br>PHONE NO.: (313) 577-7470  |
| PUBLIC LIGHTING DEPARTMENT<br>9449 GRINNE<br>DETROIT, MI 48213<br>ATTN.: STANLEY TOTILEWESKI<br>PHONE NO.: (313) 267-7232                           |
| DETROIT EDISON<br>4000 ALLEN ROAD, ROOM 101<br>ALLEN PARK, MI 48101<br>ATTN.: DAVE BUCIENSKI<br>PHONE NO.: (313) 389-9819                           |
| PRAXAIR, INC.<br>MIDWEST RELIABILITY CENTER<br>4450 KENNEDY AVENUE<br>EAST CHICAGO, IN 46312<br>ATTN.: JERRY DEWITT<br>PHONE NO.: (219) 391-5114    |
| CITY OF DETROIT WATER & SEWER DEPARTMENT<br>735 RANDOLPH STREET<br>DETROIT, MI 48226-2830<br>ATTN.: DALJIT SINGH, P.E.<br>PHONE NO.: (313) 224-4800 |
| WOLVERINE PIPELINE COMPANY<br>8105 VALLEWOOD LANE<br>PORTAGE, MI 49024-5251<br>ATTN.: FRED M. HIPSHEAR<br>PHONE NO.: (734) 428-8386                 |
| DETROIT EDISON<br>1880 STARBATT DRIVE<br>ROCHESTER HILLS, MI 48309<br>ATTN.: LEON JOHNSON<br>PHONE NO.: (248) 299-9411                              |
| AMERITECH<br>4000 ALLEN ROAD, ROOM 101<br>ALLEN PARK, MI 48101<br>ATTN.: DAVE BUCIENSKI<br>PHONE NO.: (313) 389-9819                                |

|  |
|--|
| B.M. #2<br>ELEV. 178.479<br>CHILD'S SQUARE IN TOP OF CONCRETE WALL<br>NORTH OF RR TRACKS                           |
| B.M. #1<br>ELEV. 177.624<br>RR SPIKE IN EASTERLY FACE OF LIGHT POLE W.<br>SIDE OF BRIDGE & W. END OF PLEASANT AVE. |

|   |
|---|
| WITNESS TO BRIDGE CONSTRUCTION FORT STREET<br>STA. 9+580.000<br>N7°E<br>PK NAIL IN POWER POLE<br>5.220 m    |
| WITNESS TO BRIDGE CONSTRUCTION FORT STREET<br>STA. 10+410.000<br>N88°W<br>PK NAIL IN PAVEMENT<br>26.476 m   |
| WITNESS TO BRIDGE CONSTRUCTION FORT STREET<br>STA. 10+410.000<br>S41°E<br>PK NAIL IN POWER POLE<br>33.110 m |
| WITNESS TO BRIDGE CONSTRUCTION FORT STREET<br>STA. 10+410.000<br>S195°E<br>PK IN POWER POLE<br>29.588 m     |
| WITNESS TO BRIDGE CONSTRUCTION FORT STREET<br>STA. 10+410.000<br>S54°W<br>PK NAIL IN POWER POLE<br>22.450 m |
| WITNESS TO BRIDGE CONSTRUCTION FORT STREET<br>STA. 9+580.000<br>N7°E<br>PK NAIL IN POWER POLE<br>5.220 m    |
| WITNESS TO BRIDGE CONSTRUCTION FORT STREET<br>STA. 9+580.000<br>S195°E<br>PK IN POWER POLE<br>29.588 m      |
| WITNESS TO BRIDGE CONSTRUCTION FORT STREET<br>STA. 9+580.000<br>S54°W<br>PK NAIL IN POWER POLE<br>22.450 m  |

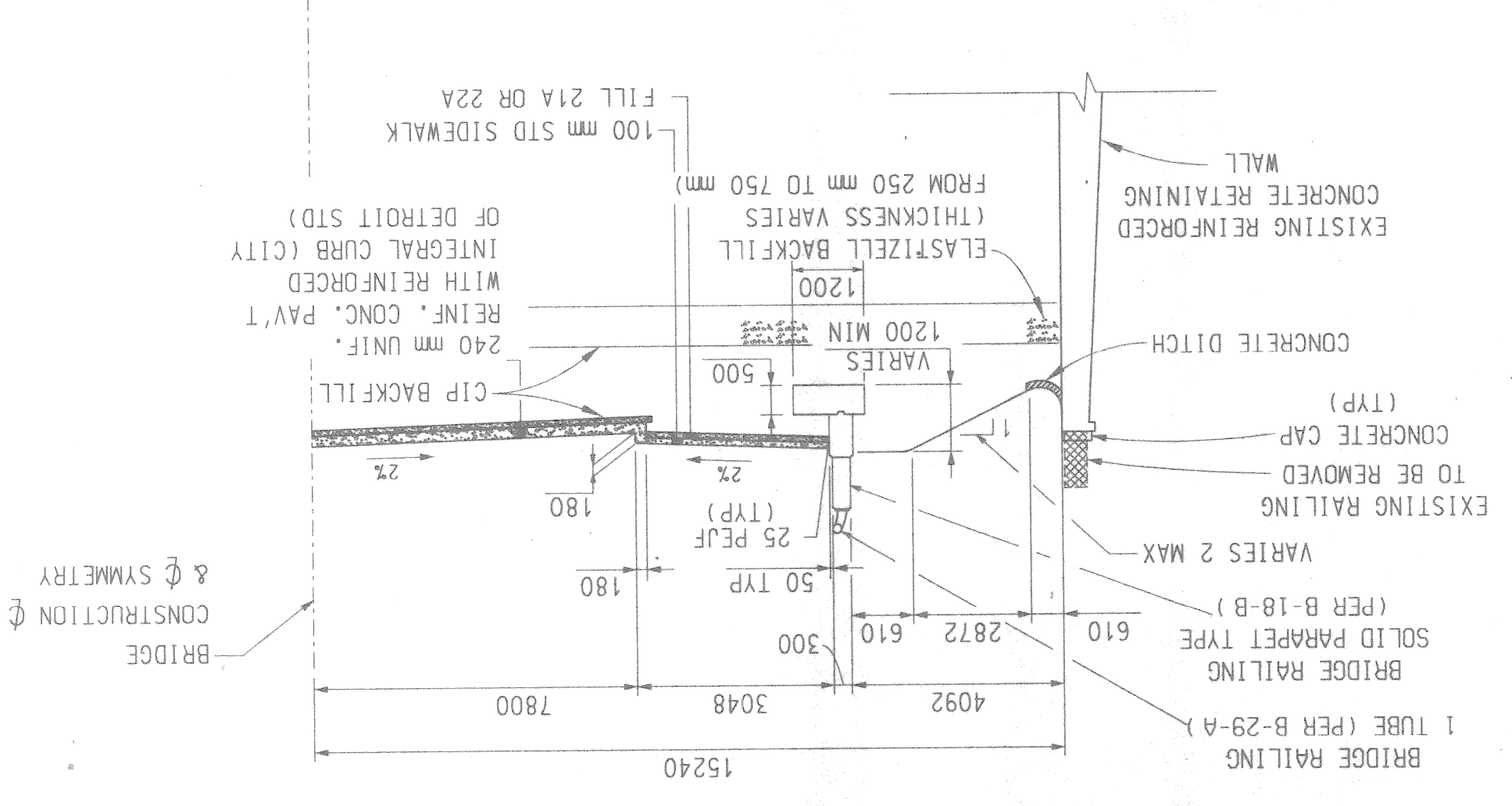
2018 ESTIMATED TRAFFIC DISTRIBUTION  
 LEGEND

|        |                       |
|--------|-----------------------|
| (1290) | DESIGN HOURLY VOLUME  |
| 12900  | AVERAGE DAILY TRAFFIC |
| 5%     | COMMERCIAL            |
| 75 KPH | DESIGN SPEED          |
| MS18   | DESIGN LOAD           |

EXISTING STRUCTURE  
 7 SPAN CONC. ENCASED STEEL BEAM SUPERSTRUCTURE SUPPORTING DECK SLAB 31700 mm WIDE,  
 SUPPORTED BY 6 REINF. CONC. PIERS AND 2 REINF. CELLULAR WALLED ABUTMENTS, ALL SPREAD  
 FOOTINGS, CONSTRUCTED IN 1928.

PLANNING ELEVATION REFER TO NAVD 88 DATUM  
 TOPOGRAPHY SHOWN HERE REPRESENTS CONDITIONS EXISTING AT THE TIME THE FIELD SURVEY  
 WAS MADE. HOWEVER, THESE CONDITIONS MAY HAVE BEEN MATERIALLY ALTERED BY THE  
 OPERATIONS OF OTHERS PRIOR TO THIS CONTRACT.  
 THE TRAIN INFORMATION SHOWN IN THE PROPOSAL DOES NOT REPRESENT A COMMITMENT BY THE  
 GIVEN RAILROAD(S) AND IS SUBJECT TO CHANGE WITHOUT NOTICE.  
 THE FOLLOWING ITEMS ARE RAILROAD OWNED (FITTINGS, TIES, RAILS, ETC) AND ANY OF THESE  
 ITEMS SALVAGED SHALL BECOME THE PROPERTY OF THE RAILROAD.  
 REMOVAL OF FENCES AND BUILDINGS IS NOT A PART OF THIS CONTRACT.  
 THE CONTRACTOR SHALL LOCATE ALL ACTIVE UNDERGROUND UTILITIES PRIOR TO STARTING WORK  
 AND SHALL CONDUCT HIS/HER OPERATIONS IN SUCH A MANNER AS TO ENSURE THAT THOSE  
 UTILITIES NOT REQUIRING RELOCATION WILL NOT BE DISTURBED.  
 TRAFFIC IS TO BE DETOURNED OVER EXISTING STREETS  
 PLAN ELEVATION REFER TO NAVD 88 DATUM

TYPICAL APPROACH HALF SECTION  
 NTS



FILE NAME: 010PSTE.DWG  
 DRAWN BY: E. OLIVER  
 DATE: 2/16/99  
 CORRECTED BY:

|     |             |      |    |
|-----|-------------|------|----|
| NO. | DESCRIPTION | DATE | BY |
|     |             |      |    |
|     |             |      |    |







|          |      |
|----------|------|
| App'D By |      |
| CK'D By  | RCN  |
| DR'N By  | EWO  |
| DSGN By  | NGH  |
|          | -97  |
|          | 4-97 |
|          | -97  |



**ENVIRONMENTAL GROUP, INC.**  
 151 M. CONGRESS, SUITE 228  
 DETROIT, MICHIGAN 48226  
 TELEPHONE (313) 961-4040

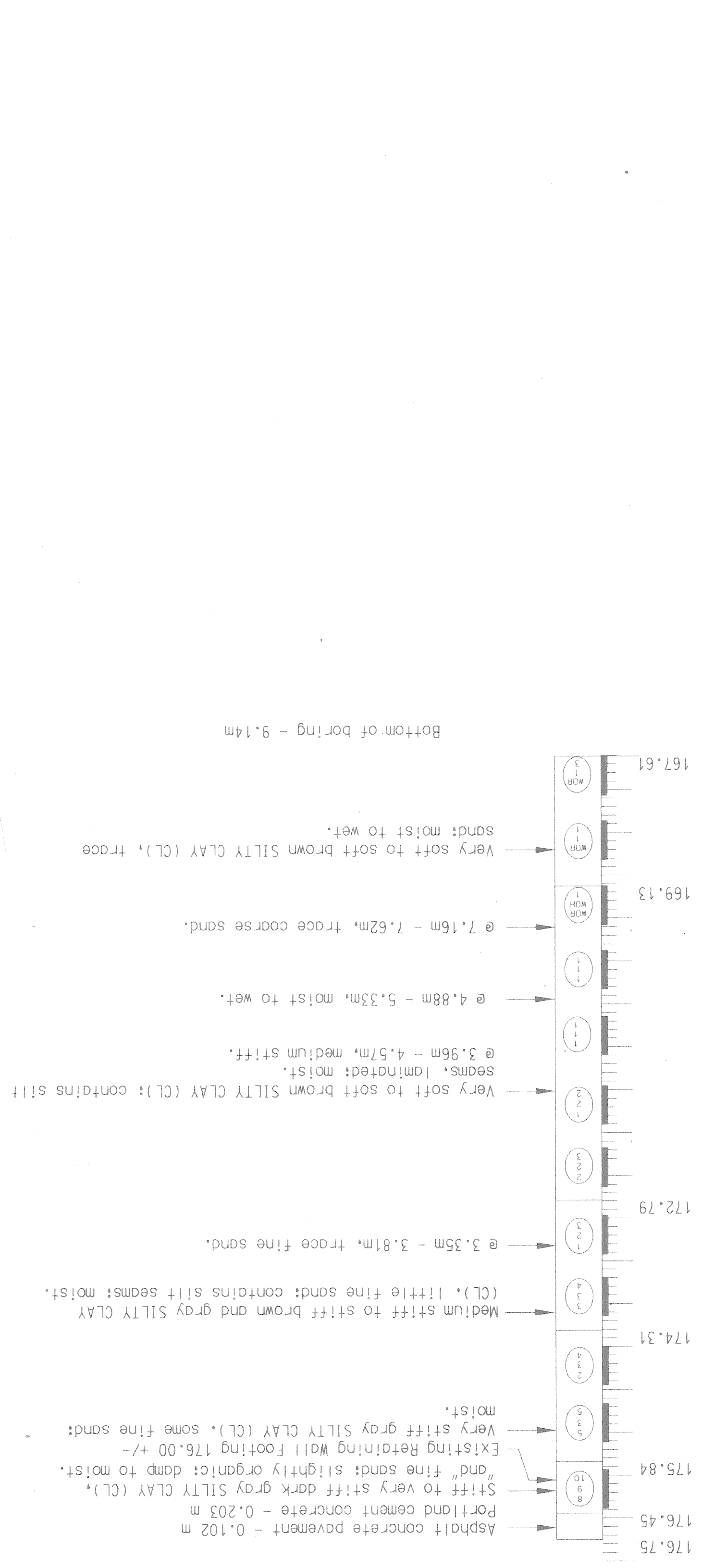


**CITY OF DETROIT**  
 FORT STREET BRIDGE OVER SANDERS AND PLEASANT AVENUES AND NORFOLK AND CONRAIL RAILROADS

|               |              |
|---------------|--------------|
| NO. OF SHEETS | 5 OF 13      |
| PROJECT NO.   | 9641-5160-06 |
| SCALE         | NTS          |

BORING DATE 8/15/96

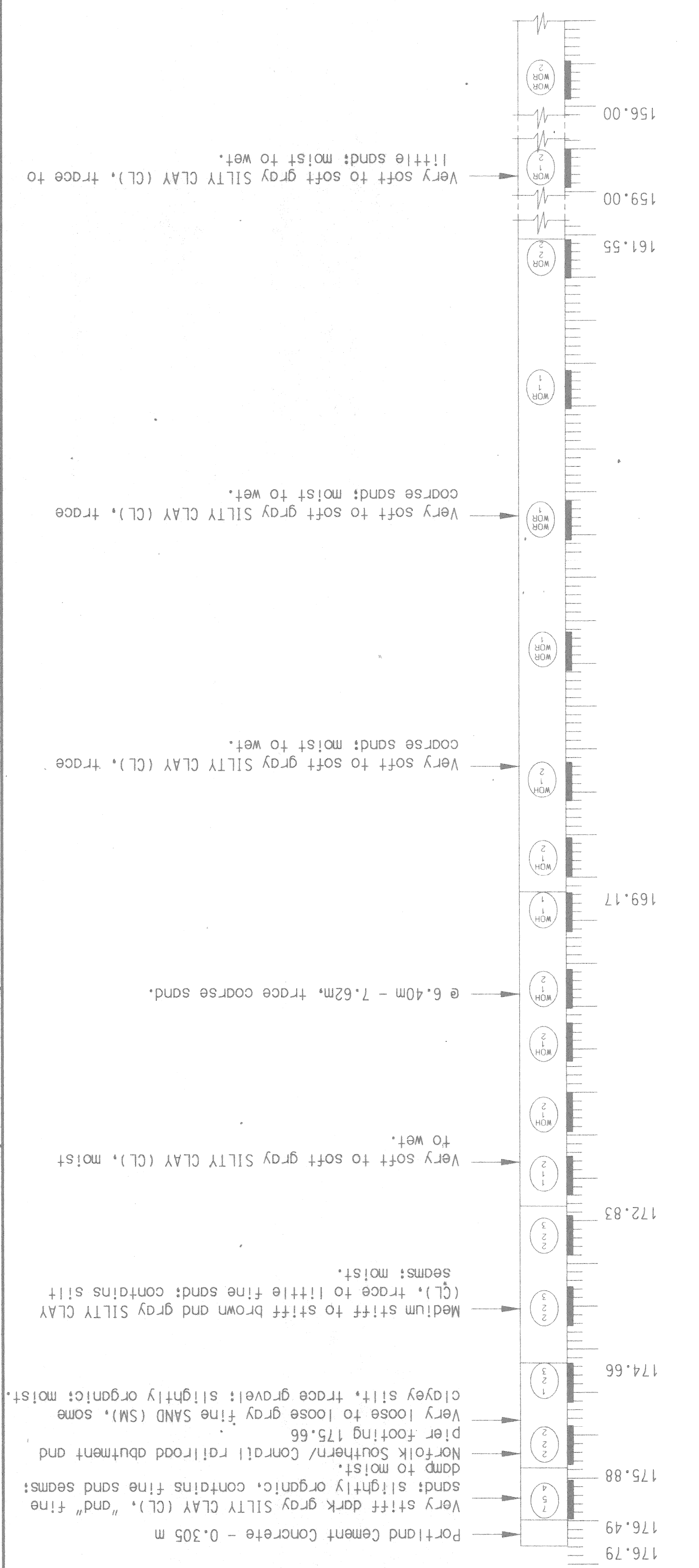
NOTE: WATER SEEPAGE AT: N/A  
 WATER LEVEL AT COMPLETION: N/A  
 (INSIDE HOLLOWSTEM AUGERS)



TEST HOLE TB-#SB-1  
 STA. 9+806.3, 18.4 m LT.  
 ELEV. GROUND SURFACE ELEVATION 176.75

BORING DATE 8/15/96

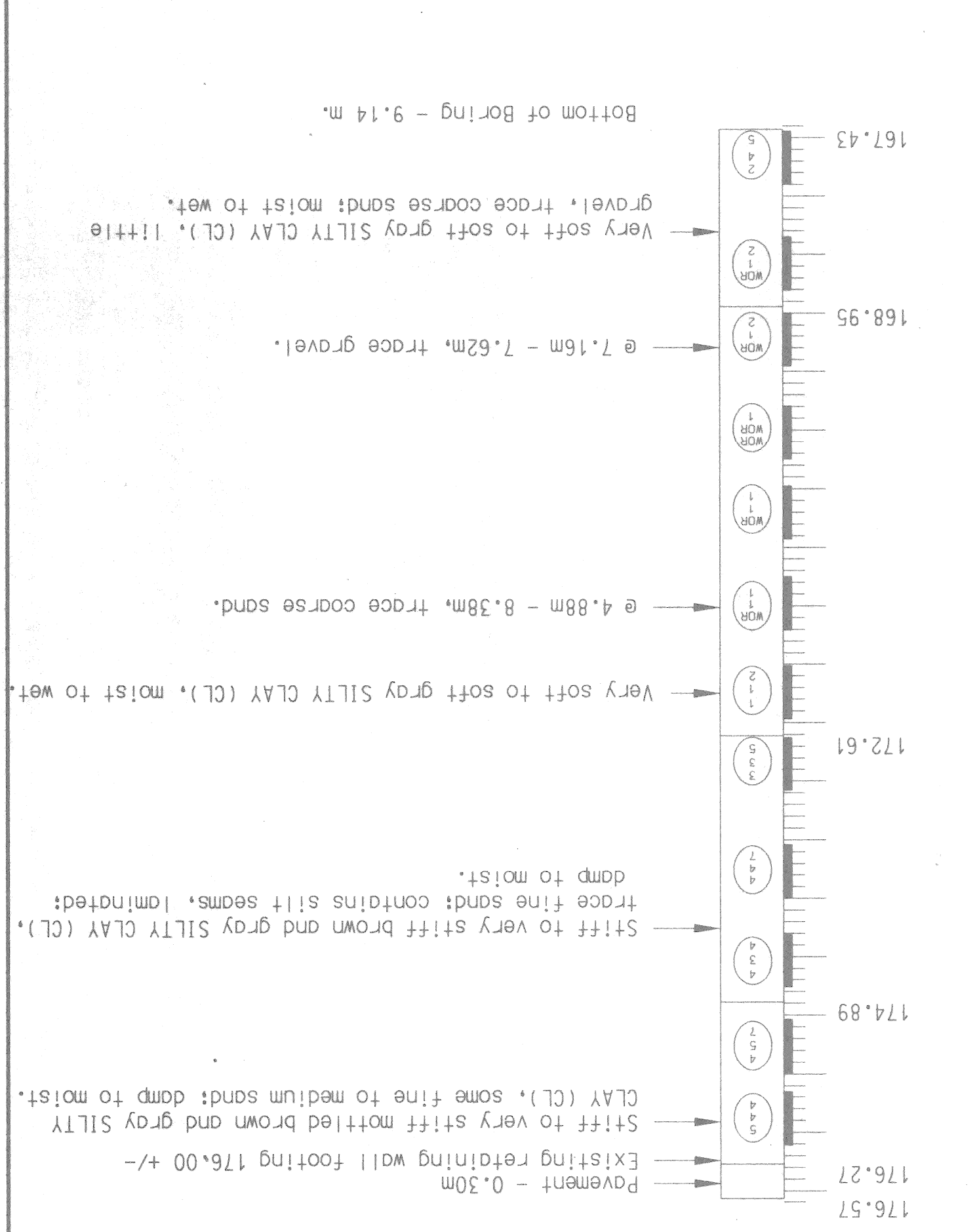
NOTE: WATER SEEPAGE AT: N/A  
 WATER LEVEL AT COMPLETION: N/A  
 (INSIDE HOLLOWSTEM AUGERS)



TEST HOLE TB-#SB-2  
 STA. 9+339.2, 21.1 m LT.  
 ELEV. GROUND SURFACE ELEVATION 176.79

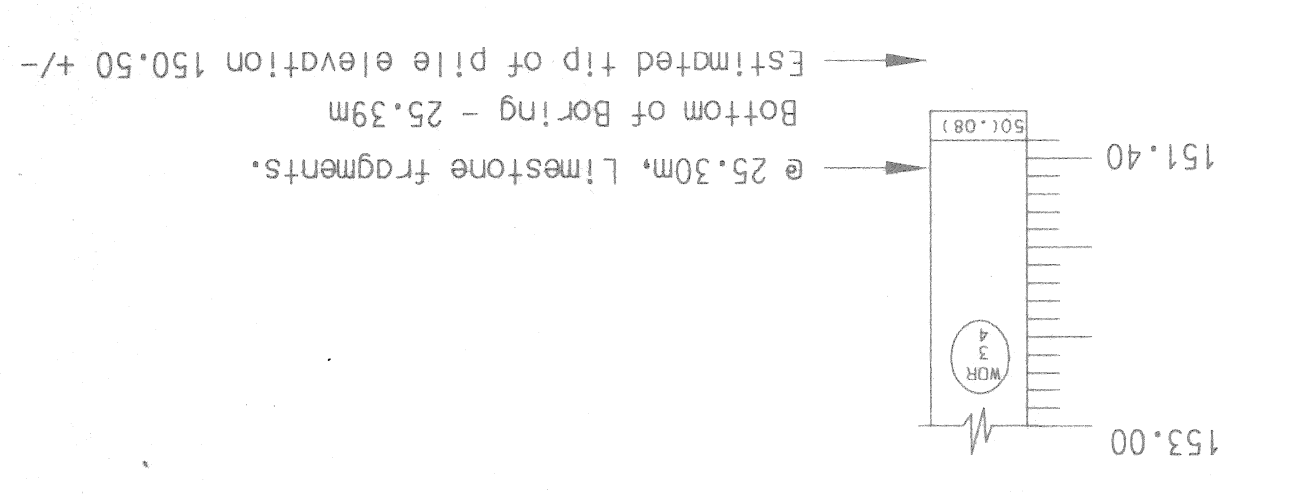
BORING DATE 8/15/96

NOTE: WATER SEEPAGE AT: N/A  
 WATER LEVEL AT COMPLETION: N/A  
 (INSIDE HOLLOWSTEM AUGERS)



TEST HOLE TB-#SB-3  
 LOCATION STATION T.  
 ELEV. GROUND SURFACE ELEVATION 176.57

BORING DATE 8/15/96



TEST HOLE TB-#SB-2 (CON.)  
 STA. 9+806.3, 18. m RT.  
 ELEV. GROUND SURFACE ELEVATION 176.79

METRIC

NUMBERS IN CIRCLES DENOTE NUMBER OF BLOWS REQUIRED TO DRIVE A 51 mm O.D. SPLIT SPOON SAMPLER 3 SUCCESSIVE 0.15 m INCREMENTS USING A 63.5 kg HAMMER FALLING 0.76 m. WHERE THE SAMPLER IS DRIVEN DISTANCES OTHER THAN THE 0.15 m INCREMENT, THE DISTANCE IS SHOWN IN PARENTHESIS TO THE RIGHT OF THE NUMBER OF BLOWS.

NUMBER OF BLOWS PER 0.15 m (X)  
 NUMBER OF BLOWS PER 0.15 m (X)  
 NUMBER OF BLOWS PER 0.15 m (X)  
 NUMBER OF BLOWS PER 0.15 m (X)  
 NUMBER OF BLOWS PER 0.15 m (XX)  
 NUMBER OF BLOWS PER DISTANCE (XX)  
 NUMBER OF BLOWS PER DISTANCE (XX)

WORK INDICATES REQUIRED PENETRATION ACHIEVED BY THE WEIGHT OF ROD ALONE  
 MOH INDICATES REQUIRED PENETRATION ACHIEVED BY THE WEIGHT OF HAMMER ALONE  
 CONSISTENCY WAS DETERMINED BY INSPECTION OF SAMPLES AND SUBSTANTIATED BY SOILS RESISTANCE TO DRILLING TOOLS.  
 WATER LEVELS MAY BE INFLUENCED BY RESIDUAL BORING WATER. THE SOIL BORING LOGS REPRESENT POINT INFORMATION. PRESENTATION OF THIS INFORMATION IN NO WAY IMPLIES THAT SUBSURFACE CONDITIONS ARE THE SAME AT LOCATIONS OTHER THAN THE EXACT LOCATION OF THE BORING.  
 SOIL BORINGS WERE PERFORMED ON DATES SHOWN BELOW BORING.

BY: DODSON-STILSON, INC.  
 6121 Huntley Road  
 Columbus, OH 43229-1003  
 PHONE: (614) 848-6712



|          |        |
|----------|--------|
| App'D BY |        |
| CK'D BY  |        |
| DR'N BY  | R.J.D. |
| DSGN BY  |        |
|          | -97    |
|          | 4-97   |
|          | -97    |



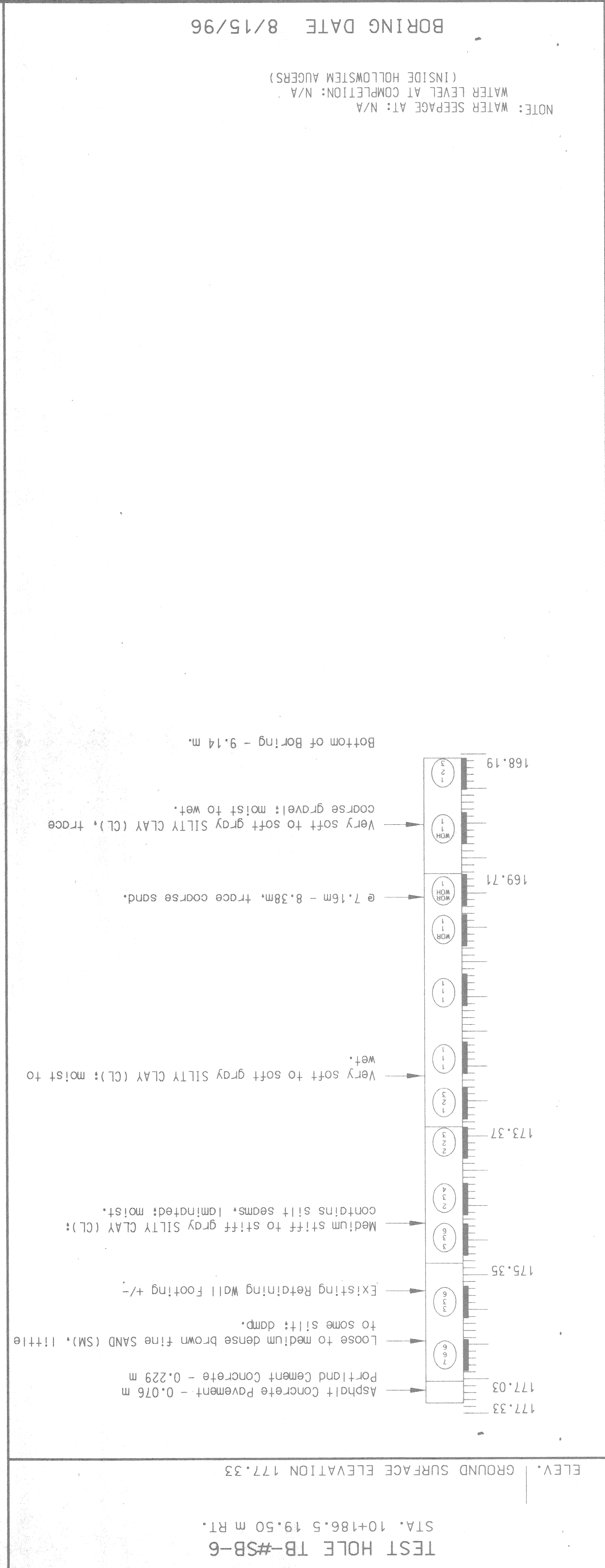
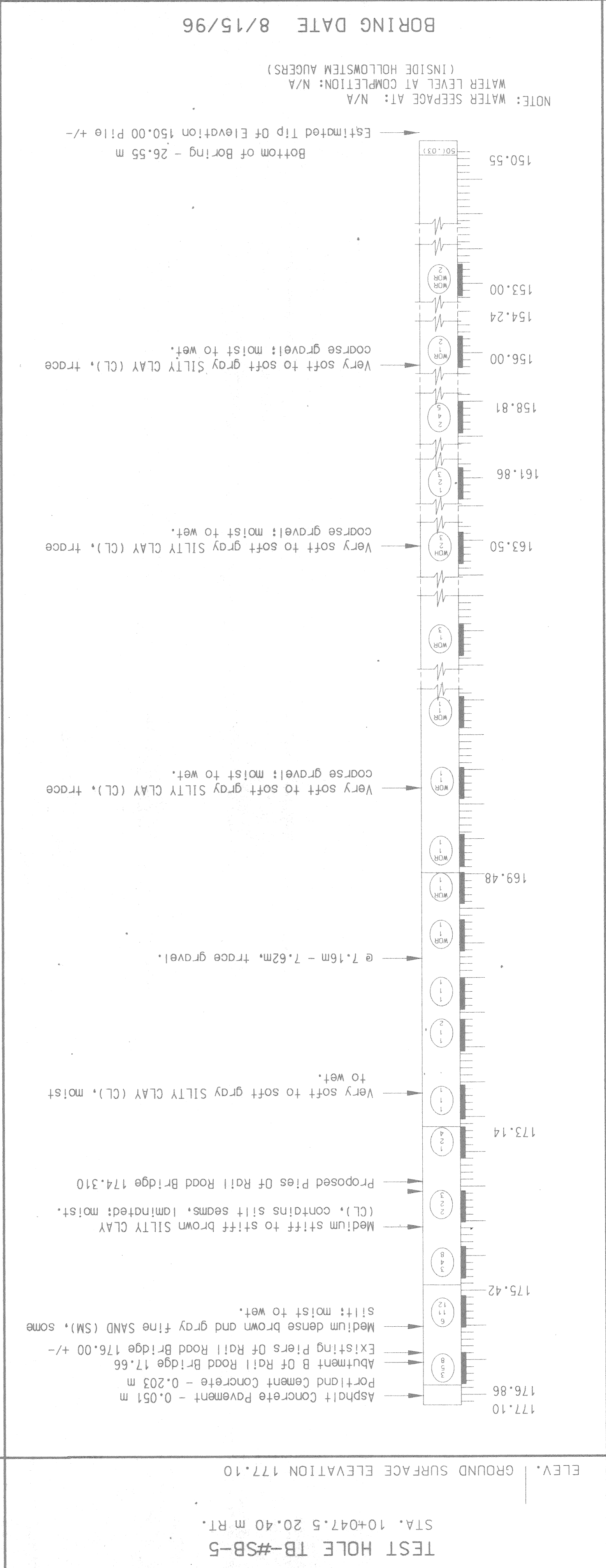
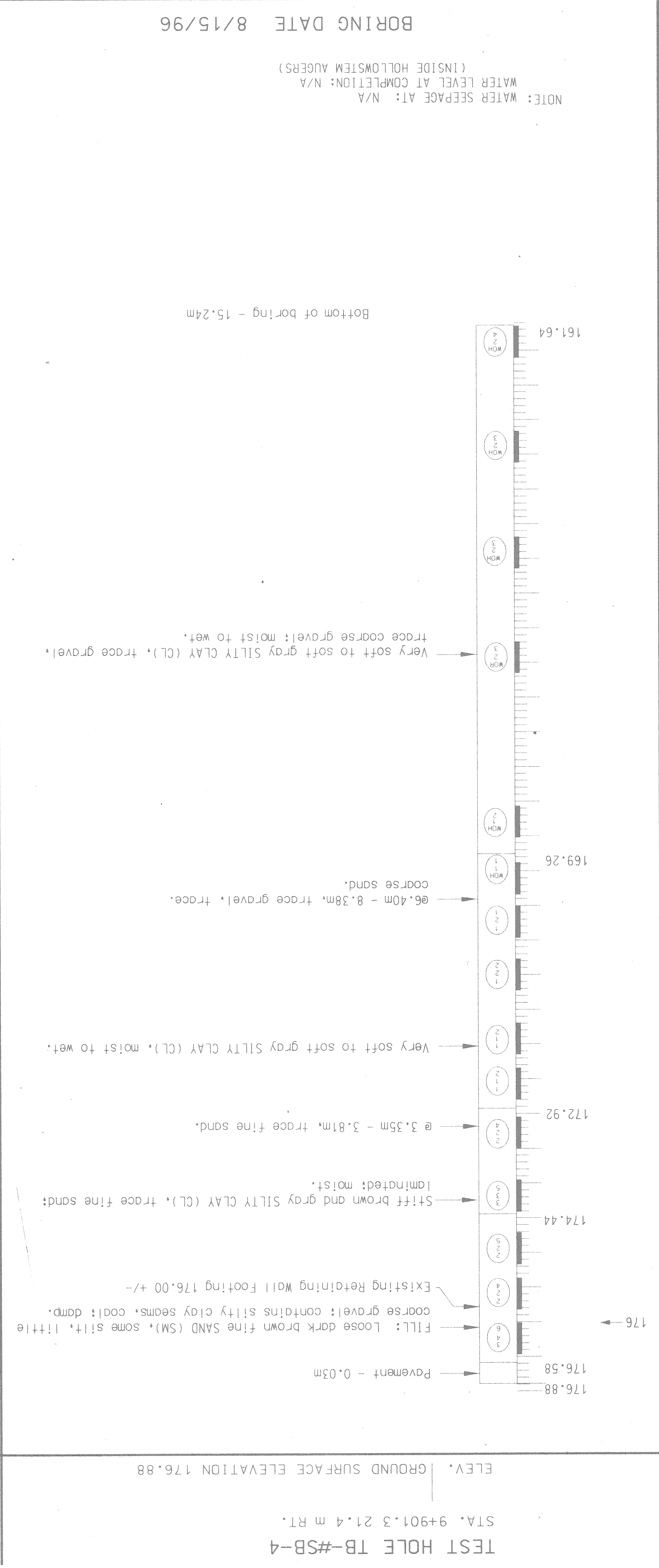
**ENVIRONMENTAL GROUP, INC.**  
 151 W. CONGRESS, SUITE 328  
 DETROIT, MICHIGAN, 48226  
 TELEPHONE (313) 961-4040



**CITY OF DETROIT**  
 FORT STREET BRIDGE OVER SANDERS AND CONRAIL RAILROADS

**LOG OF BORING**

|              |              |
|--------------|--------------|
| NO. OF SHEET | 6 OF 13      |
| PROJECT NO.  | 9641-5160-06 |
| SCALE        | NTS          |



**PLAN**  
 SCALE: NTS

**NOTES:**  
 NUMBERS IN CIRCLES DENOTE NUMBER OF BLOWS REQUIRED TO DRIVE A 51 mm O.D. SPLIT SPOND SAMPLER 3 SUCCESSIVE 0.15 m INCREMENTS USING A 63.5 kg HAMMER FALLING 0.76 m. WHERE THE SAMPLER IS DRIVEN DISTANCES OTHER THAN THE 0.15 m INCREMENT, THE DISTANCE IS SHOWN IN PARENTHESIS TO THE RIGHT OF THE NUMBER OF BLOWS.  
 (X) NUMBER OF BLOWS PER 0.15 m  
 (X) NUMBER OF BLOWS PER 0.15 m  
 (X) NUMBER OF BLOWS PER 0.15 m  
 (X) NUMBER OF BLOWS PER 0.15 m  
 (X) NUMBER OF BLOWS PER 0.15 m  
 (X) NUMBER OF BLOWS PER DISTANCE  
 (XX) NUMBER OF BLOWS PER DISTANCE

WOR INDICATES REQUIRED PENETRATION ACHIEVED BY THE WEIGHT OF ROD ALONE  
 OF HAMMER ALONE  
 WOH INDICATES REQUIRED PENETRATION ACHIEVED BY THE WEIGHT OF HAMMER ALONE  
 CONSISTENCY WAS DETERMINED BY INSPECTION OF SAMPLES AND SUBSTANTIATED BY SOILS RESISTANCE TO DRILLING TOOLS.  
 WATER LEVELS MAY BE INFLUENCED BY RESIDUAL BORING WATER.  
 THE SOIL BORING LOGS REPRESENT POINT INFORMATION.  
 PRESENTATION OF THIS INFORMATION IN NO WAY IMPLIES THAT SUBSURFACE CONDITIONS ARE THE SAME AT LOCATIONS OTHER THAN THE EXACT LOCATION OF THE BORING.  
 SOIL BORINGS WERE PERFORMED ON DATES SHOWN BELOW BORING.  
 BY: DODDSON-STILSON, INC.  
 6121 Huntley Road  
 Columbus, OH 43229-1003  
 PHONE: (614) 848-6712

DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN. ELEVATIONS, COORDINATES, CURVE AND ALIGNMENT DATA ARE IN METERS.  
 STATIONS ARE IN KILOMETERS + METERS.







REVISIONS

|          |     |      |
|----------|-----|------|
| OSGN BY  | EWO | -99  |
| DR'N BY  | EWO | 4-99 |
| CK'D BY  |     | -99  |
| APP'D BY |     | -99  |

**ENVIRONMENTAL**  
GROUP, INC. A DLZ COMPANY  
151 W. CONGRESS, SUITE 208  
DETROIT, MICHIGAN 48226  
TELEPHONE (313) 961-4040

**SNB**  
SNE

DETROIT

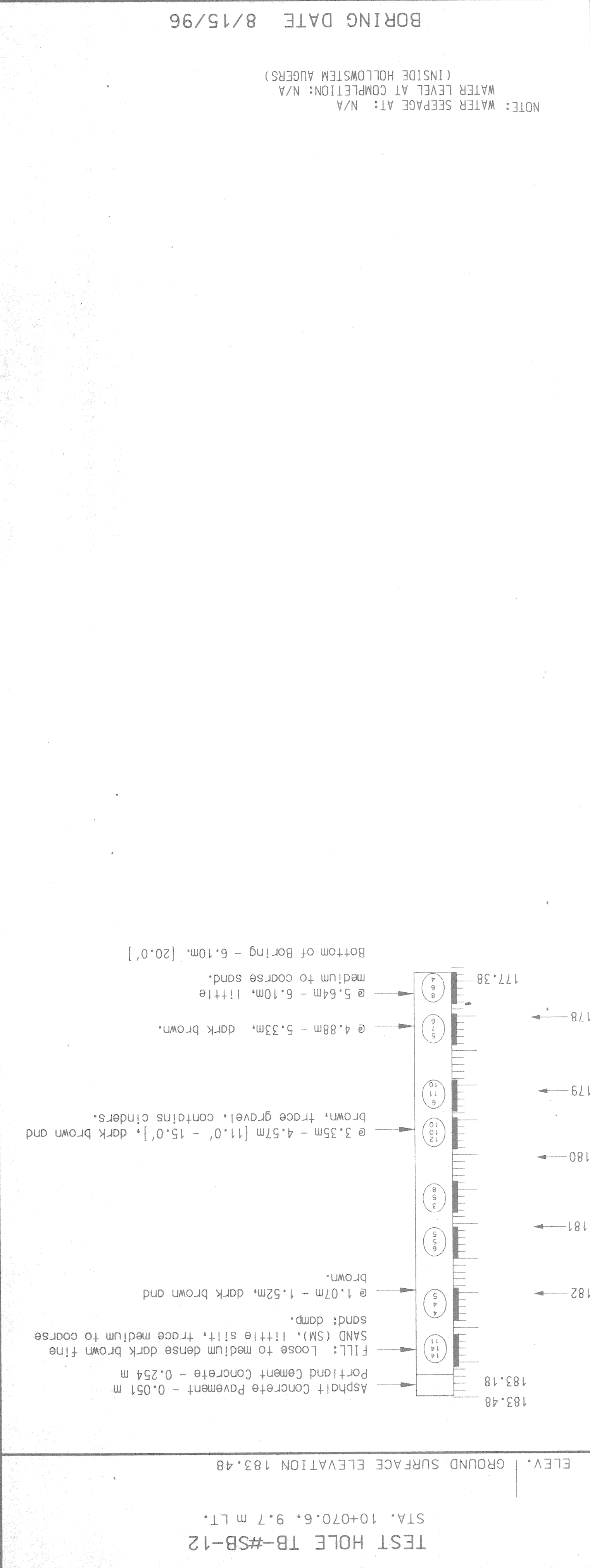
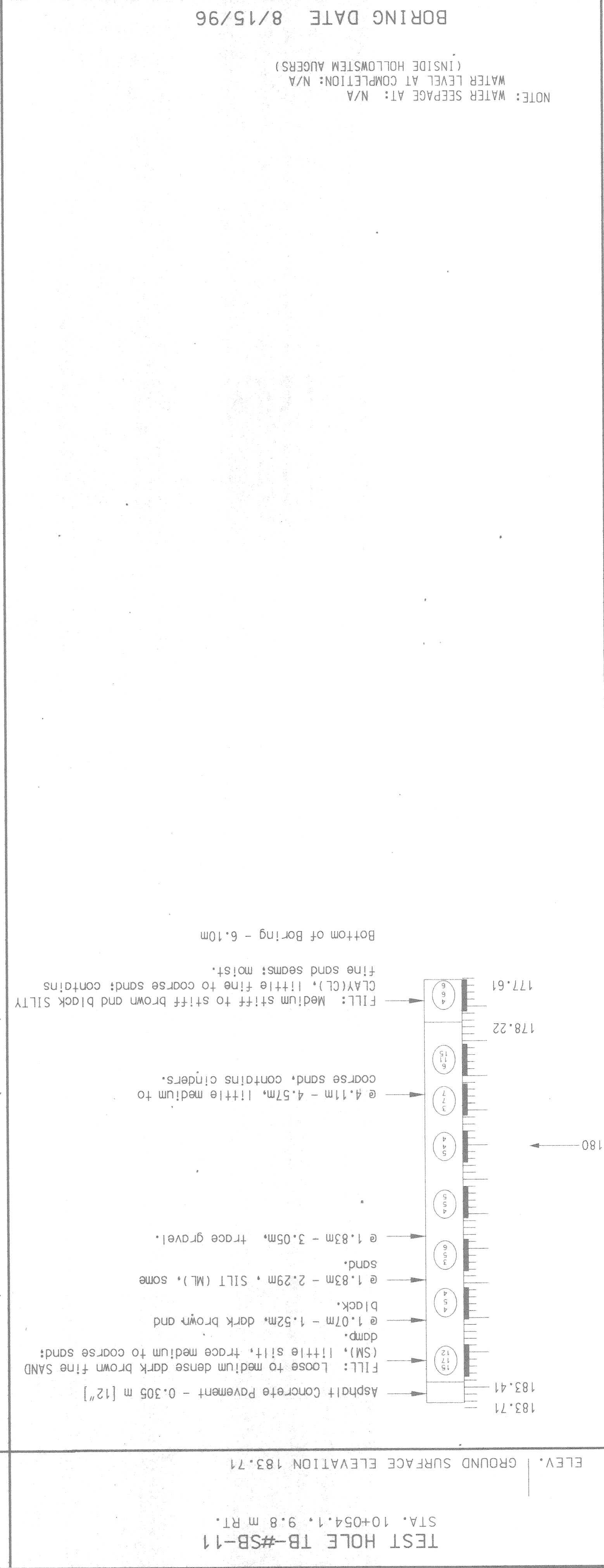
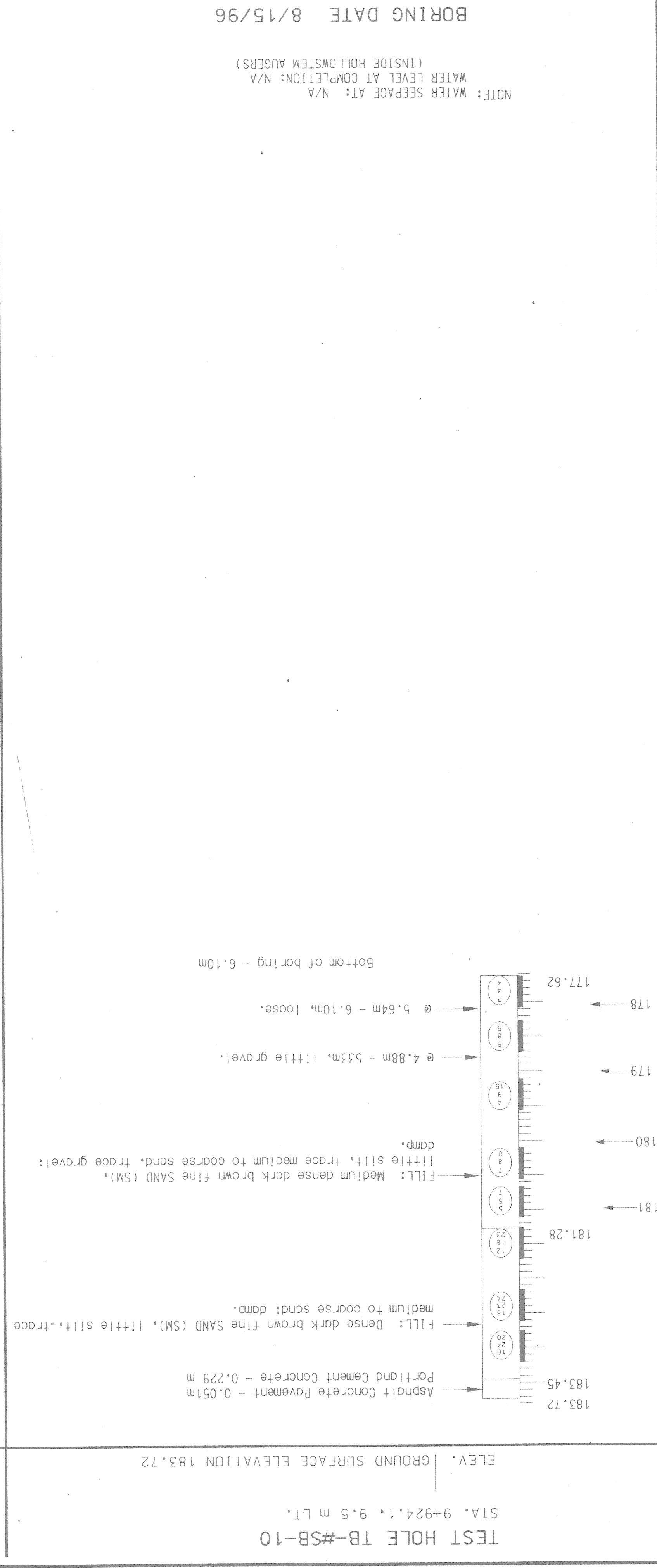
Making it better  
for you

**CITY OF DETROIT**  
FORT STREET BRIDGE OVER SANDERS  
AND CONRAIL RAILROADS

**LOG OF BORING**

PROJECT NO. 9641-5160-06  
SHEET NO. 8 OF 13

SCALE NTS



**PLAN**  
SCALE: NTS

SB #10  
SB #11  
SB #12

Fort Street  
Pleasant Ave  
Sanders Ave

NORFOLK SOUTHERN  
& CONRAIL RAILROADS

NOTES:  
NUMBERS IN CIRCLES DENOTE NUMBER OF BLOWS REQUIRED TO DRIVE A  
51 O.D. SPLIT SPOON SAMPLER 3 SUCCESSIVE 0.15 m INCREMENTS USING  
A 63.5 KG HAMMER FALLING 0.76 m. WHERE THE SAMPLER IS DRIVEN  
DISTANCES OTHER THAN THE 0.15 m INCREMENT, THE DISTANCE IS SHOWN  
IN PARENTHESES TO THE RIGHT OF THE NUMBER OF BLOWS.  
NUMBER OF BLOWS PER 0.15 m (X)  
NUMBER OF BLOWS PER 0.15 m (X)  
NUMBER OF BLOWS PER 0.15 m (X)  
NUMBER OF BLOWS PER 0.15 m (X)  
NUMBER OF BLOWS PER DISTANCE XX(X)  
NUMBER OF BLOWS PER DISTANCE XX(X)  
WATER LEVELS MAY BE INFLUENCED BY RESIDUAL BORING WATER.  
THE SOIL BORING LOGS REPRESENT POINT INFORMATION.  
PRESENTATION OF THIS INFORMATION IN NO WAY IMPLIES THAT  
SUBSURFACE CONDITIONS ARE THE SAME AT LOCATIONS OTHER  
THAN THE EXACT LOCATION OF THE BORING.  
SOIL BORINGS WERE PERFORMED ON DATES SHOWN BELOW BORING.  
BY: DODSON-STILSON, INC.  
6121 Huntley Road  
Columbus, OH 43229-1003  
PHONE: (614) 848-6712

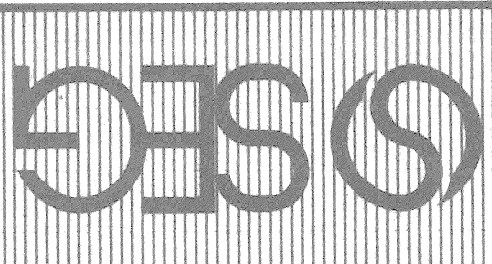
DIMENSIONS ARE IN MILLIMETERS UNLESS  
OTHERWISE SHOWN. ELEVATIONS, COORDINATES,  
CURVE AND ALIGNMENT DATA ARE IN METERS.  
STATIONS ARE IN KILOMETERS + METERS.

METRIC



REVISIONS

|           |        |      |
|-----------|--------|------|
| DESIGN BY | N.G.H. | 4-99 |
| DR 'N' BY | E.W.O. | 4-99 |
| CK 'D' BY | R.G.W. | 4-99 |
| APP'D BY  |        | 4-99 |



SNELL ENVIRONMENTAL GROUP, INC. A DLZ Company  
 151 W. CONGRESS, SUITE 328  
 DETROIT, MICHIGAN 48226  
 TELEPHONE (313) 961-4040



CITY OF DETROIT

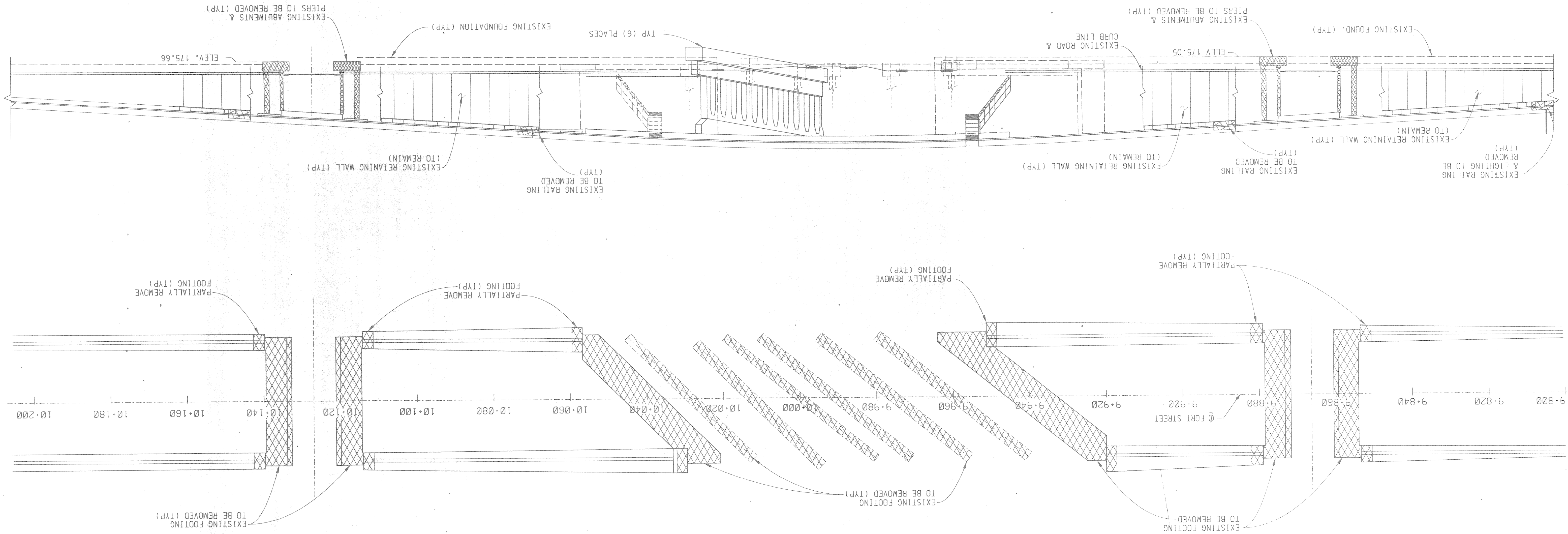
FORT STREET BRIDGE OVER SANDERS AND PLEASANT AVENUES AND NORFOLK

GENERAL PLAN OF THE STRUCTURE

|             |              |
|-------------|--------------|
| PROJECT NO. | 9641-5160-06 |
| NO. SHEET   | 9 OF 13      |
| SCALE       | NOT TO SCALE |

FILE NAME: .DSN

METRIC  
 DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN. ELEVATIONS, COORDINATES, CURVE AND ALIGNMENT DATA ARE IN METERS. STATIONS ARE IN KILOMETERS + METERS.

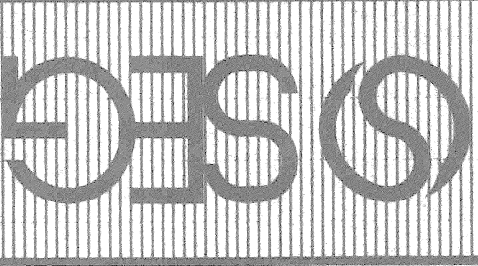


| NO. | DESCRIPTION | DATE | BY |
|-----|-------------|------|----|
|     |             |      |    |
|     |             |      |    |



REVISIONS

|               |        |      |
|---------------|--------|------|
| APP'D BY      | N.G.H. | 4-99 |
| DR'N BY       | E.W.O. | 4-99 |
| CK'D BY       | R.G.W. | 4-99 |
| FINAL CK'D BY |        | 4-99 |



**SNELL ENVIRONMENTAL GROUP, INC.**  
 151 W. CONGRESS, SUITE 328  
 DETROIT, MICHIGAN 48226  
 TELEPHONE (313) 961-6040  
 MARKING IS BETTER FOR YOU



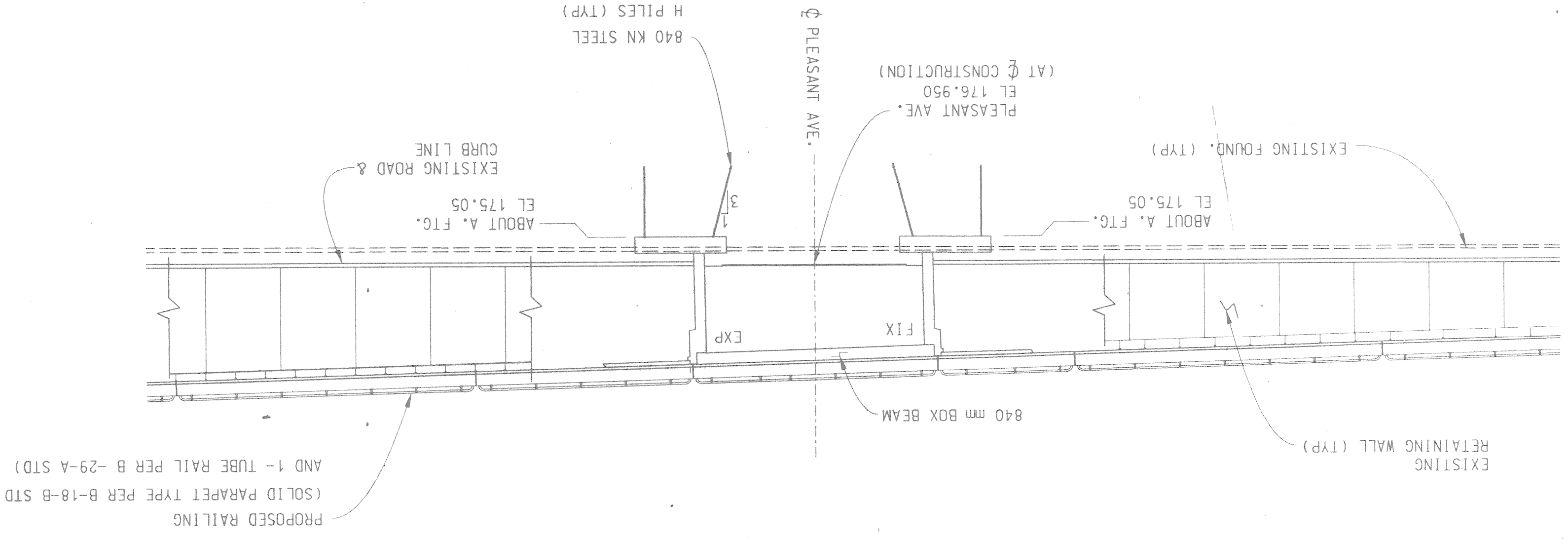
**CITY OF DETROIT**  
 FORT STREET BRIDGE OVER SANDERS  
 AND PLEASANT AVENUES AND NORFOLK

GENERAL PLAN OF THE STRUCTURE

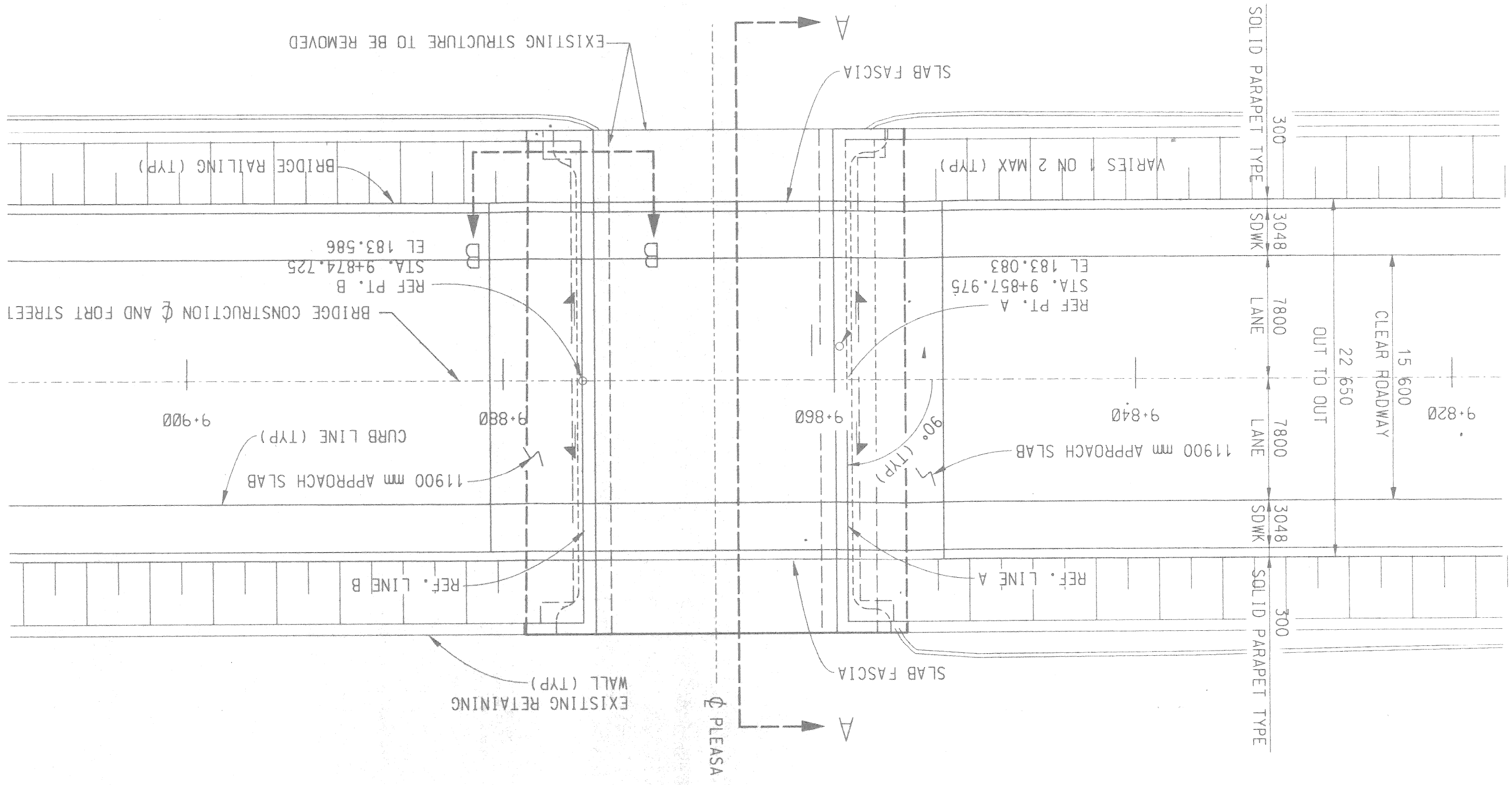
SCALE NOT TO SCALE  
 PROJECT NO. 9641-5160-06  
 SHEET NO. 10 OF 13

METRIC  
 DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN. ELEVATIONS, COORDINATES, CURVE AND ALIGNMENT DATA ARE IN METERS. STATIONS ARE IN KILOMETERS + METERS.

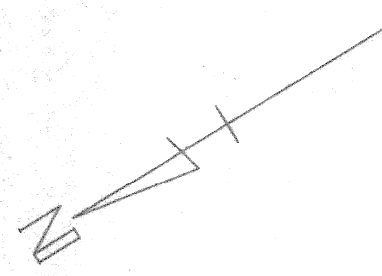
ELEVATION  
 (ALONG THE  $\phi$  CONSTRUCTION)



PLAN



NOTES:  
 THE RECONSTRUCTION DESIGN IS BASED ON CURRENT ASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES MS18 LOADING. LIVE LOAD PLUS IMPACT DEFLECTION DOES NOT EXCEED (1/1000) OF SPAN LENGTH. THE LOAD FACTOR METHOD WAS USED FOR THIS DESIGN. THE MAXIMUM FOUNDATIONS PRESSURES ARE CALCULATED TO BE:  
 EXISTING RETAINING WALLS 144 KPa +/-  
 FOR SECTIONS A-A AND B-B SEE SHEET 13 OF 13



| NO. | DESCRIPTION | DATE | BY |
|-----|-------------|------|----|
|     |             |      |    |
|     |             |      |    |
|     |             |      |    |

FILE NAME: 00N

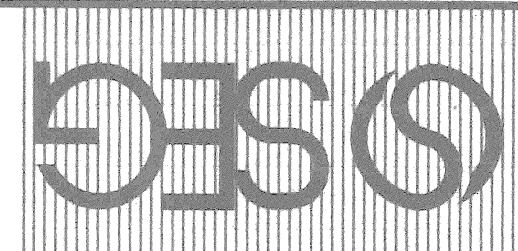






REVISIONS

|               |        |
|---------------|--------|
| App'd By      |        |
| FINAL CK'D BY |        |
| CK'D BY       | R.G.W. |
| DR'N BY       | E.W.D. |
| DSGN BY       | N.G.H. |
|               | 4-99   |
|               | 4-99   |
|               | 4-99   |
|               | 4-99   |



SNELL ENVIRONMENTAL GROUP, INC. A DLZ Company  
 151 W. CONGRESS, SUITE 328  
 DETROIT, MICHIGAN 48226  
 TELEPHONE (313) 981-4060



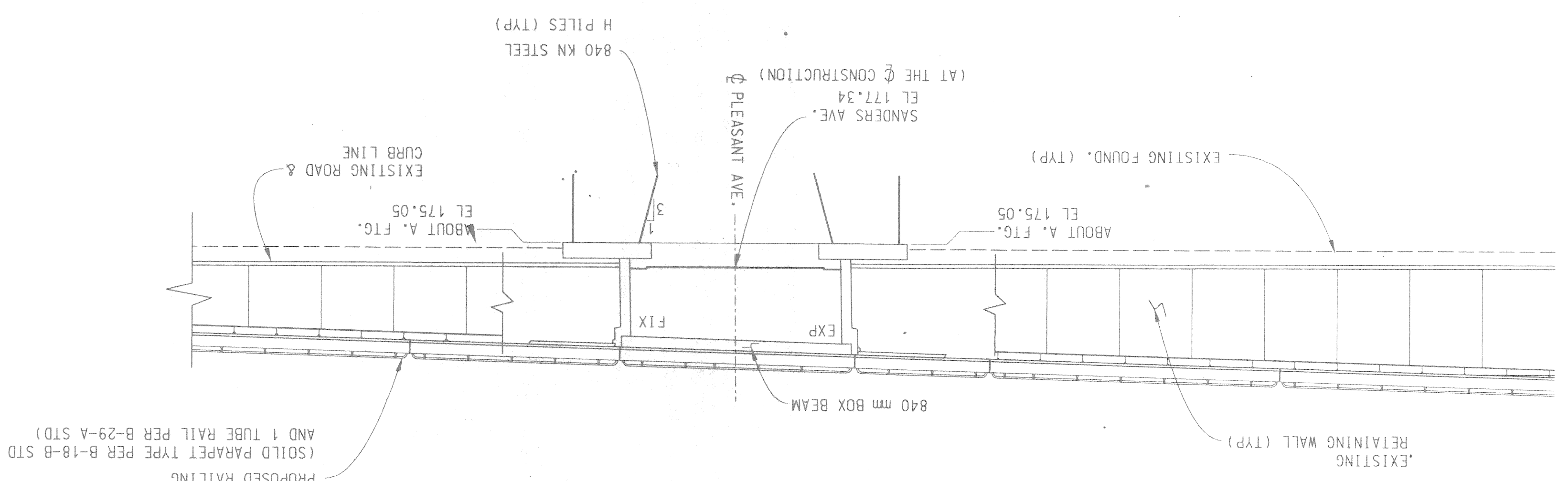
CITY OF DETROIT  
 AND PLEASANT AVENUES AND NORFOLK  
 AND CONRAIL RAILROADS

GENERAL PLAN OF  
 THE STRUCTURE

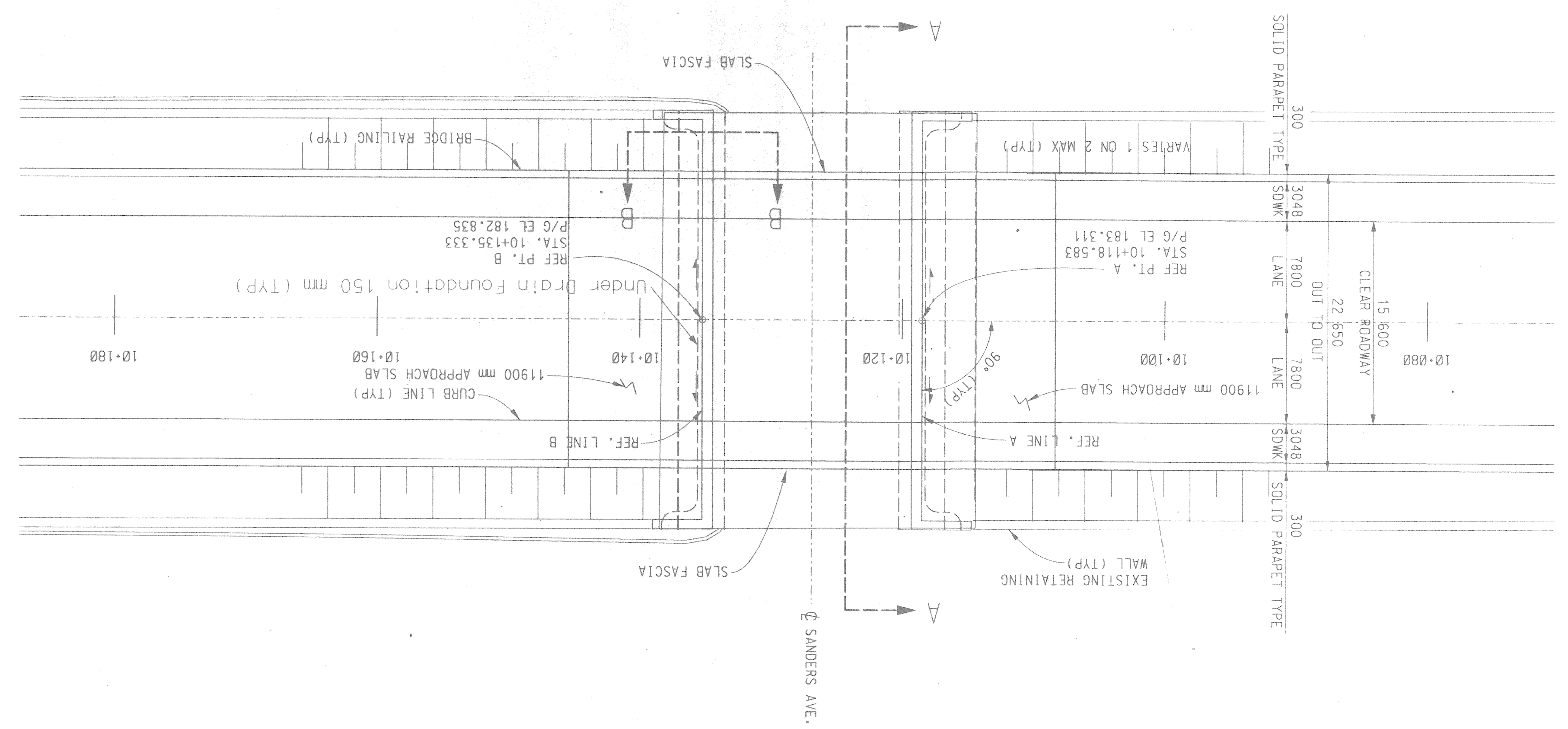
SCALE NOT TO SCALE  
 PROJECT NO. 9641-5160-06  
 SHEET NO. 12 OF 13

METRIC  
 DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN. ELEVATIONS, COORDINATES, CURVE AND ALIGNMENT DATA ARE IN METERS. STATIONS ARE IN KILOMETERS + METERS.

ELEVATION (ALONG THE  $\phi$  CONSTRUCTION)



PLAN



THE MAXIMUM FOUNDATIONS PRESSURES ARE CALCULATED TO BE: 144 KPa +/-  
 EXISTING RETAINING WALLS

FOR SECTIONS A-A AND B-B SEE SHEET 13 OF 13

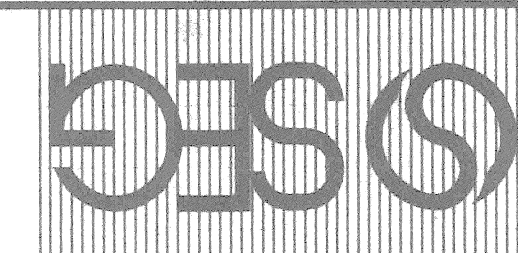
NOTES:  
 THE RECONSTRUCTION DESIGN IS BASED ON CURRENT ASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES M518 LOADING. LIVE LOAD PLUS IMPACT DEFLECTION DOES NOT EXCEED (1/1000) OF SPAN LENGTH. THE LOAD FACTOR METHOD WAS USED FOR THIS DESIGN.

| NO. | DESCRIPTION | DATE | BY |
|-----|-------------|------|----|
|     |             |      |    |
|     |             |      |    |
|     |             |      |    |

FILE NAME: .DGN



|               |      |
|---------------|------|
| APPR'D BY     |      |
| FINAL CK'D BY | 4-99 |
| CK'D BY       | 4-99 |
| DR'N BY       | 4-99 |
| DSGN BY       | 4-99 |



SNELL ENVIRONMENTAL GROUP, INC. A DLZ Company  
 151 W. CONGRESS, SUITE 328  
 DETROIT, MICHIGAN 48226  
 TELEPHONE (313) 961-4040

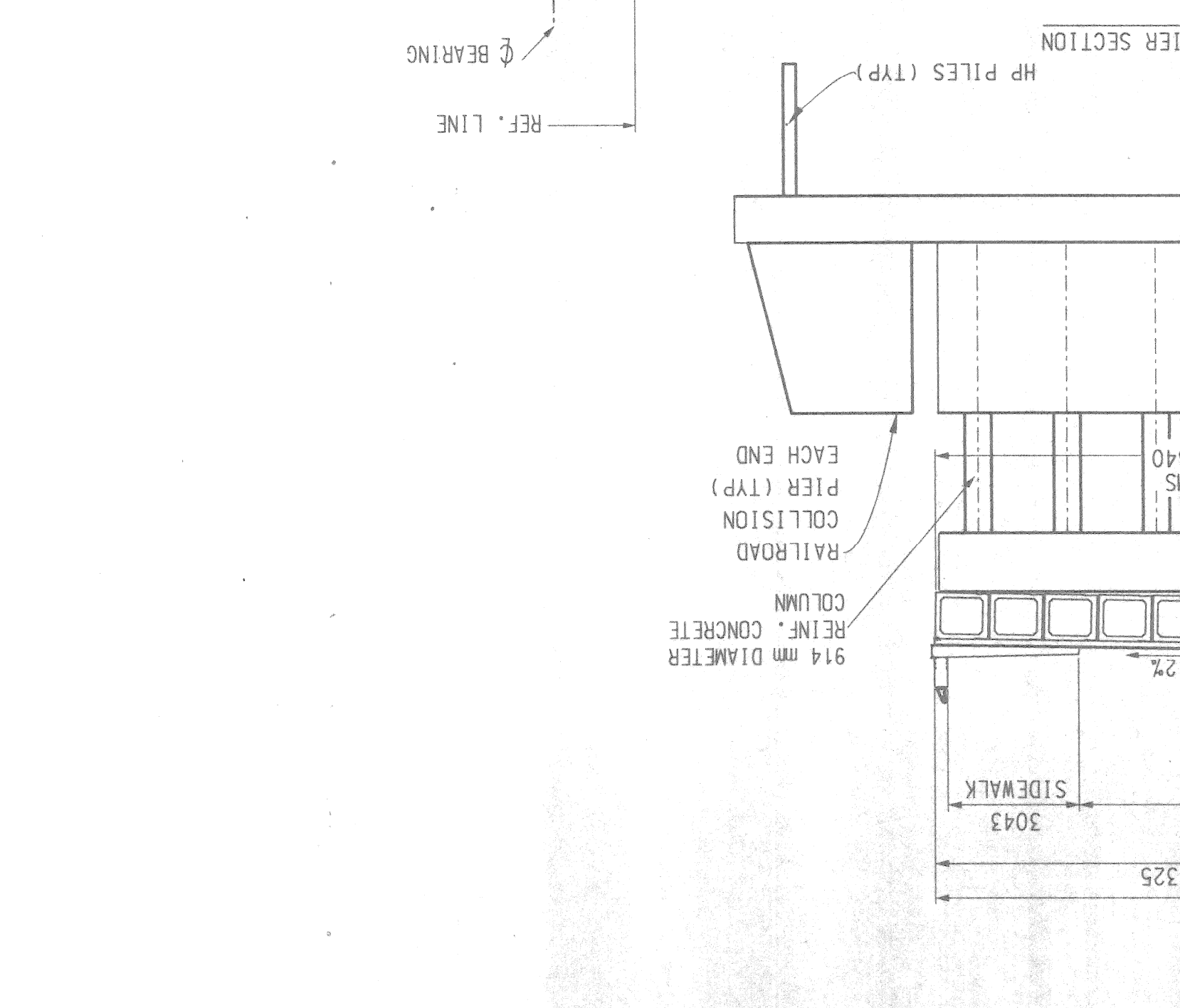
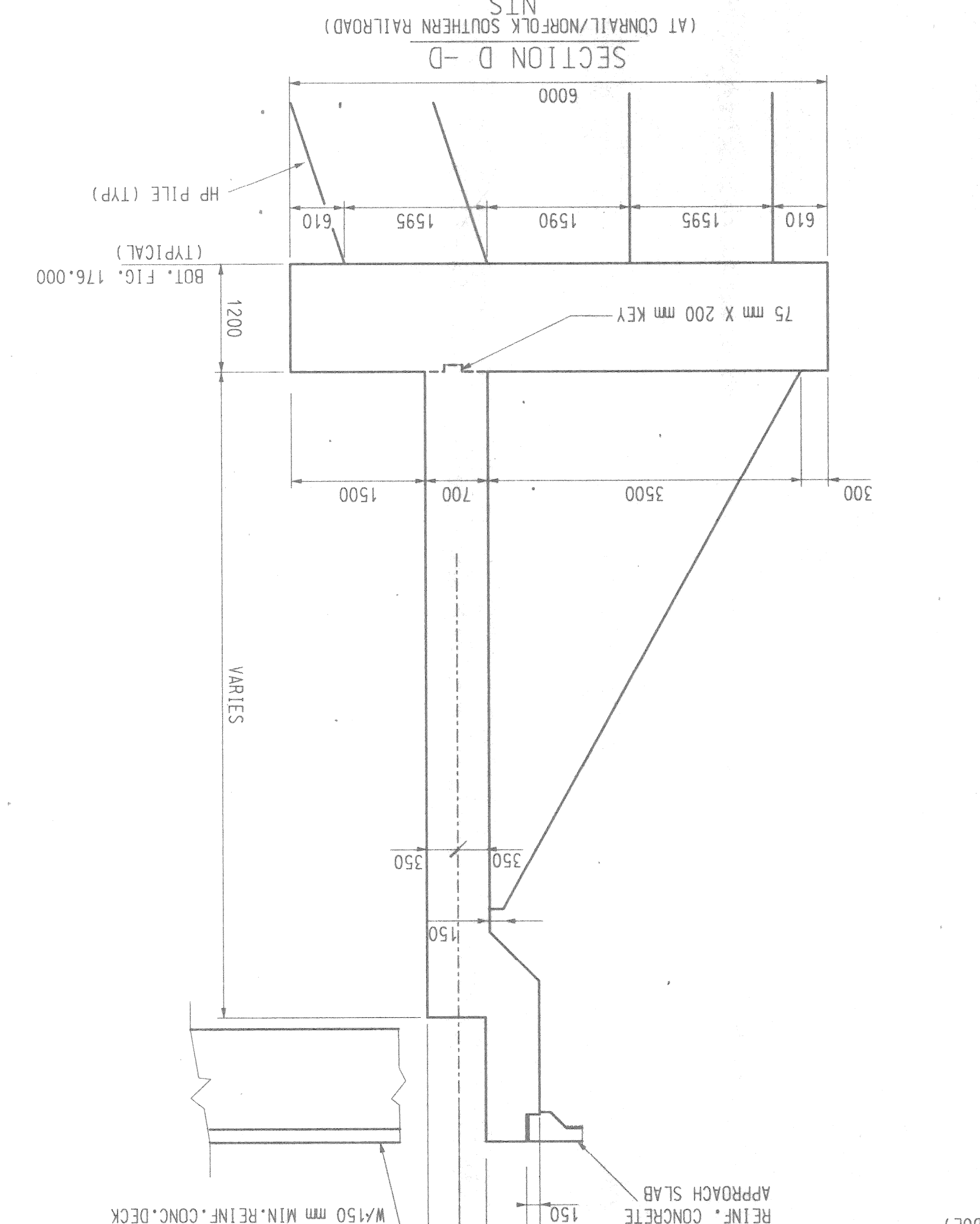
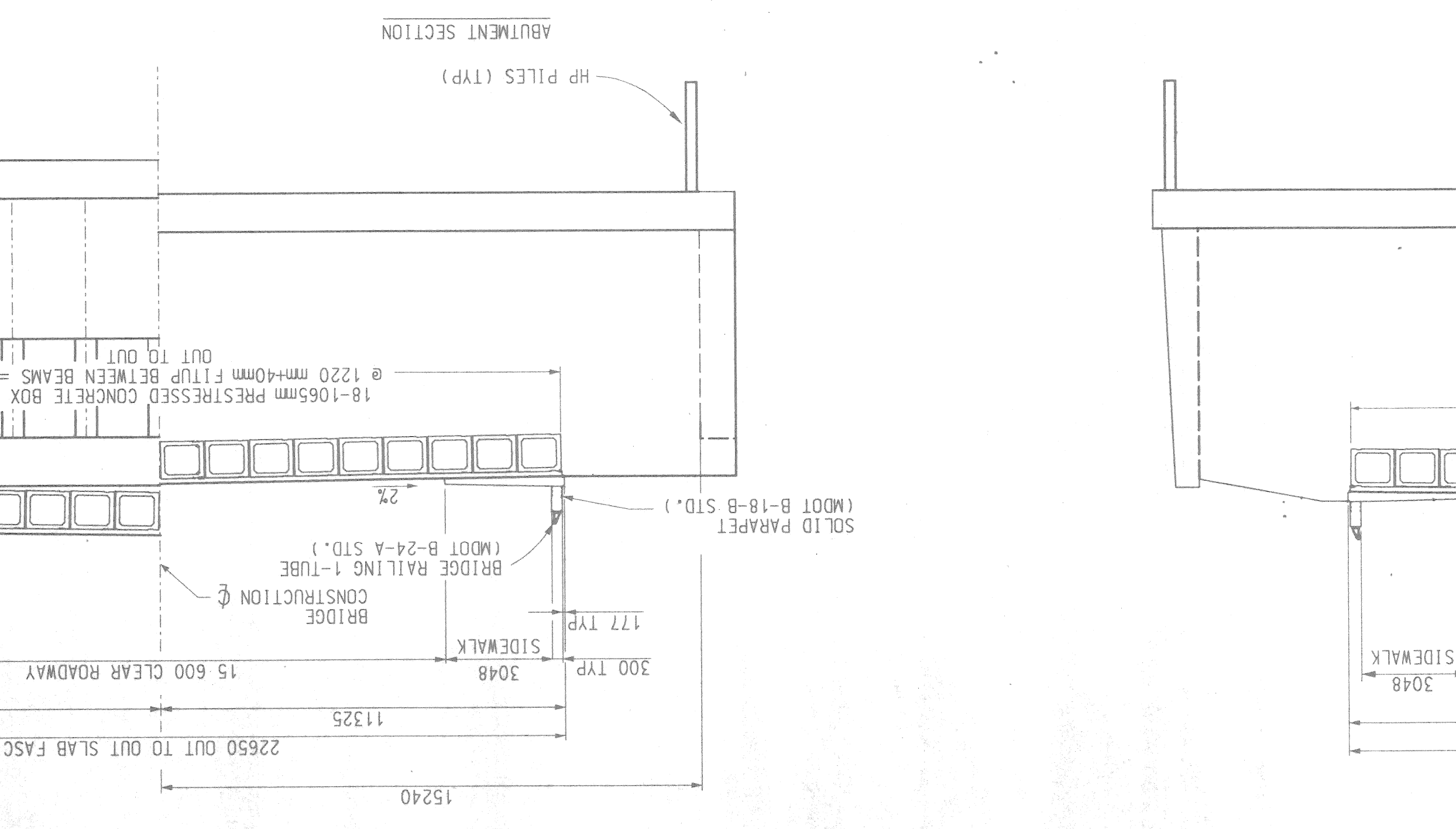
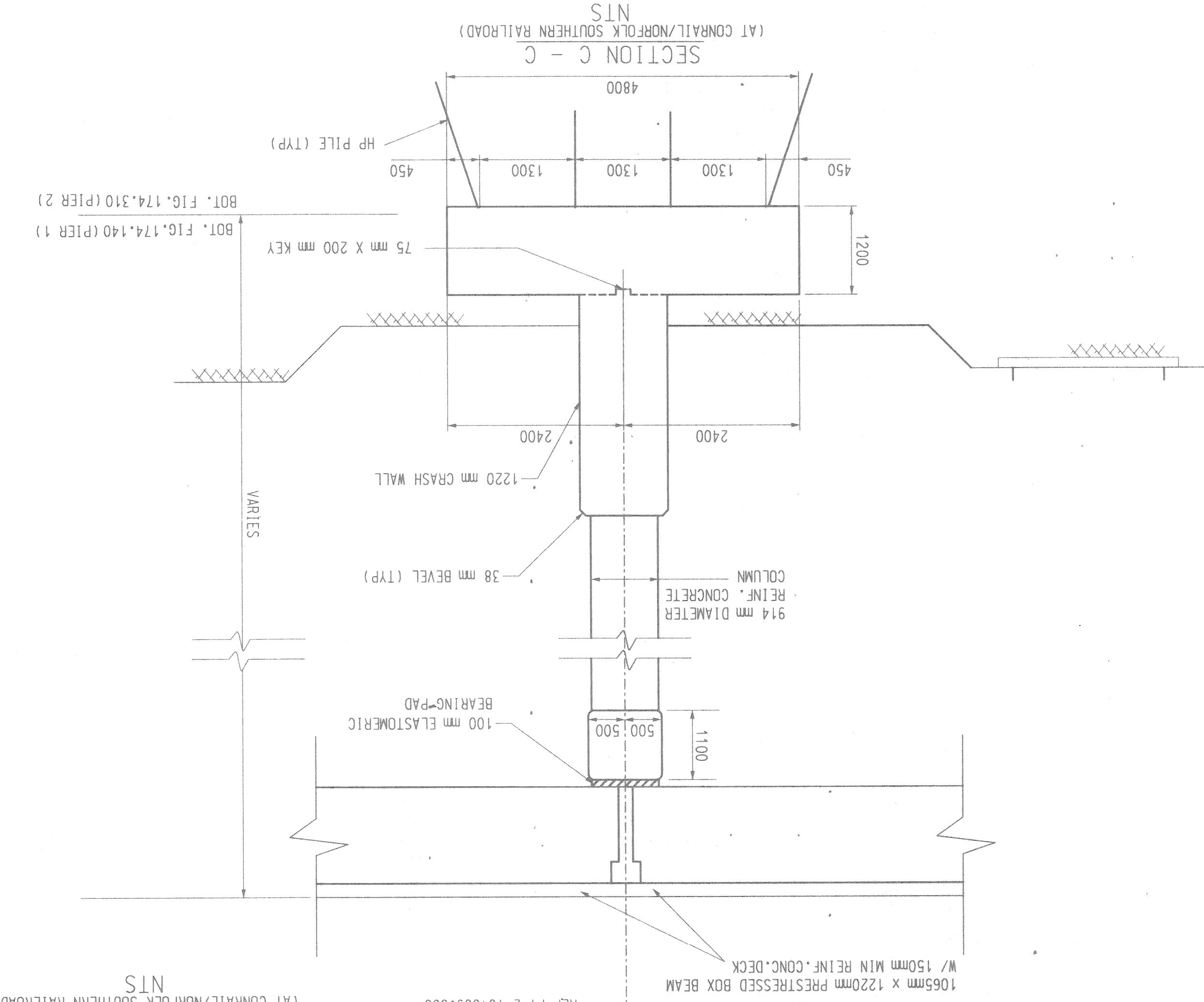
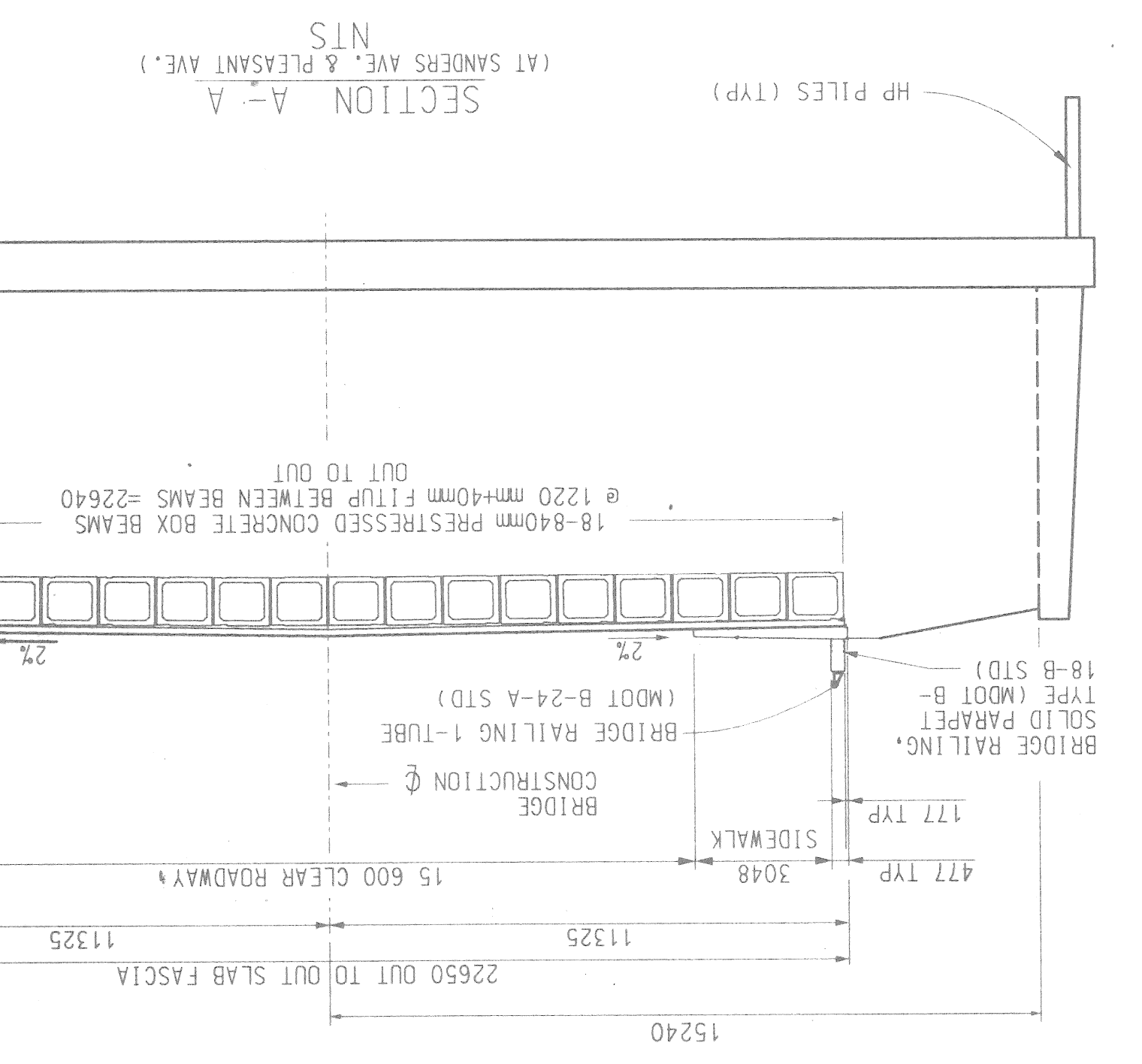
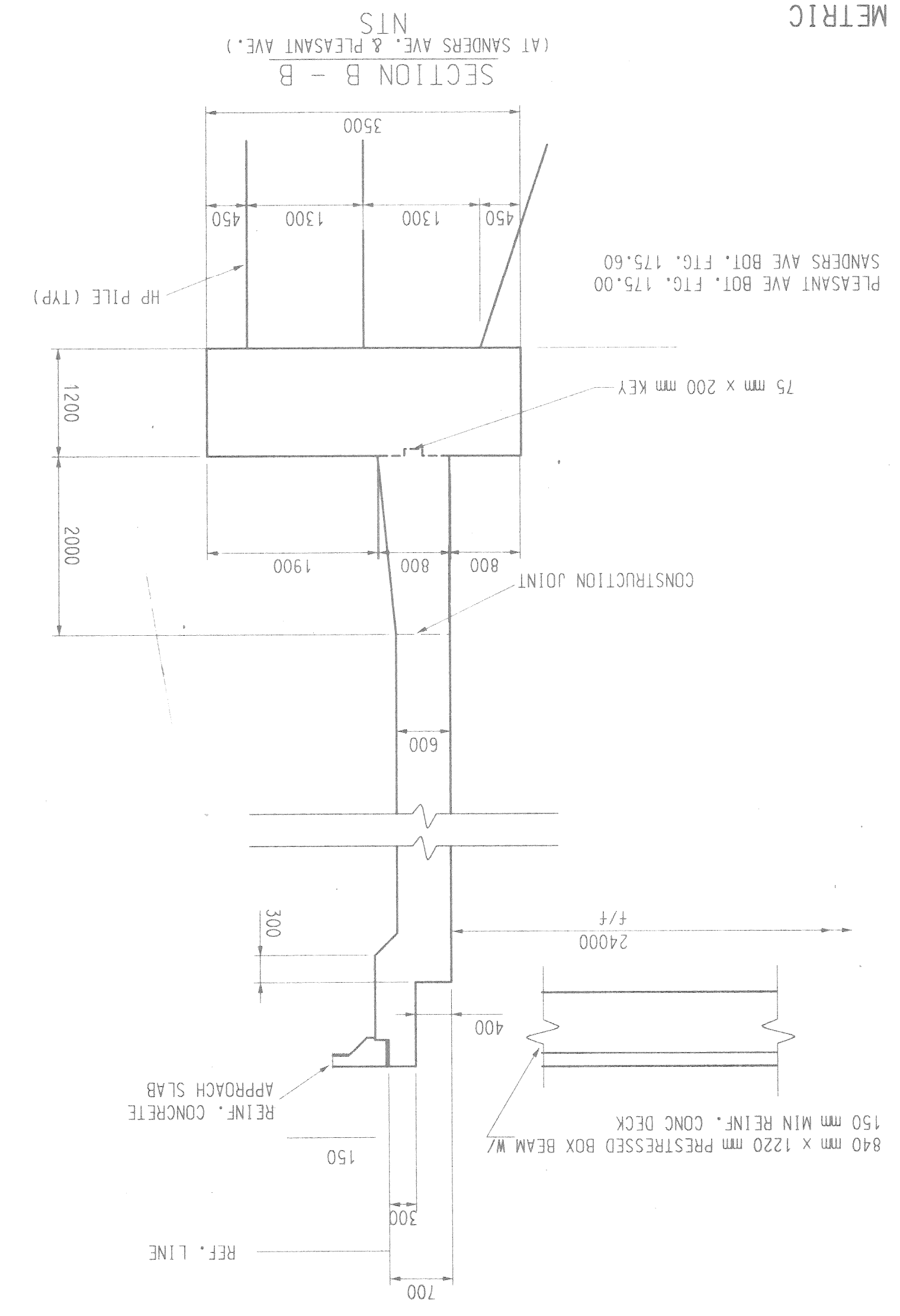


CITY OF DETROIT  
 AND PLEASANT AVENUES AND NORFOLK  
 SOUTHERN RR

GENERAL PLAN OF THE STRUCTURE

|         |              |
|---------|--------------|
| NO.     | 13 OF 13     |
| SHEET   |              |
| PROJECT | 9641-5160-06 |
| SCALE   | NOT TO SCALE |

DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN. ELEVATIONS, COORDINATES, CURVE AND ALIGNMENT DATA ARE IN METERS. STATIONS ARE IN KILOMETERS + METERS.



GENERAL PLAN OF THE STRUCTURE