



PORT OF TACOMA

PORTAC LOG SORT YARD PAVING PROJECT - 1988

CONTRACT NO. 646

CONSULTING ENGINEERS

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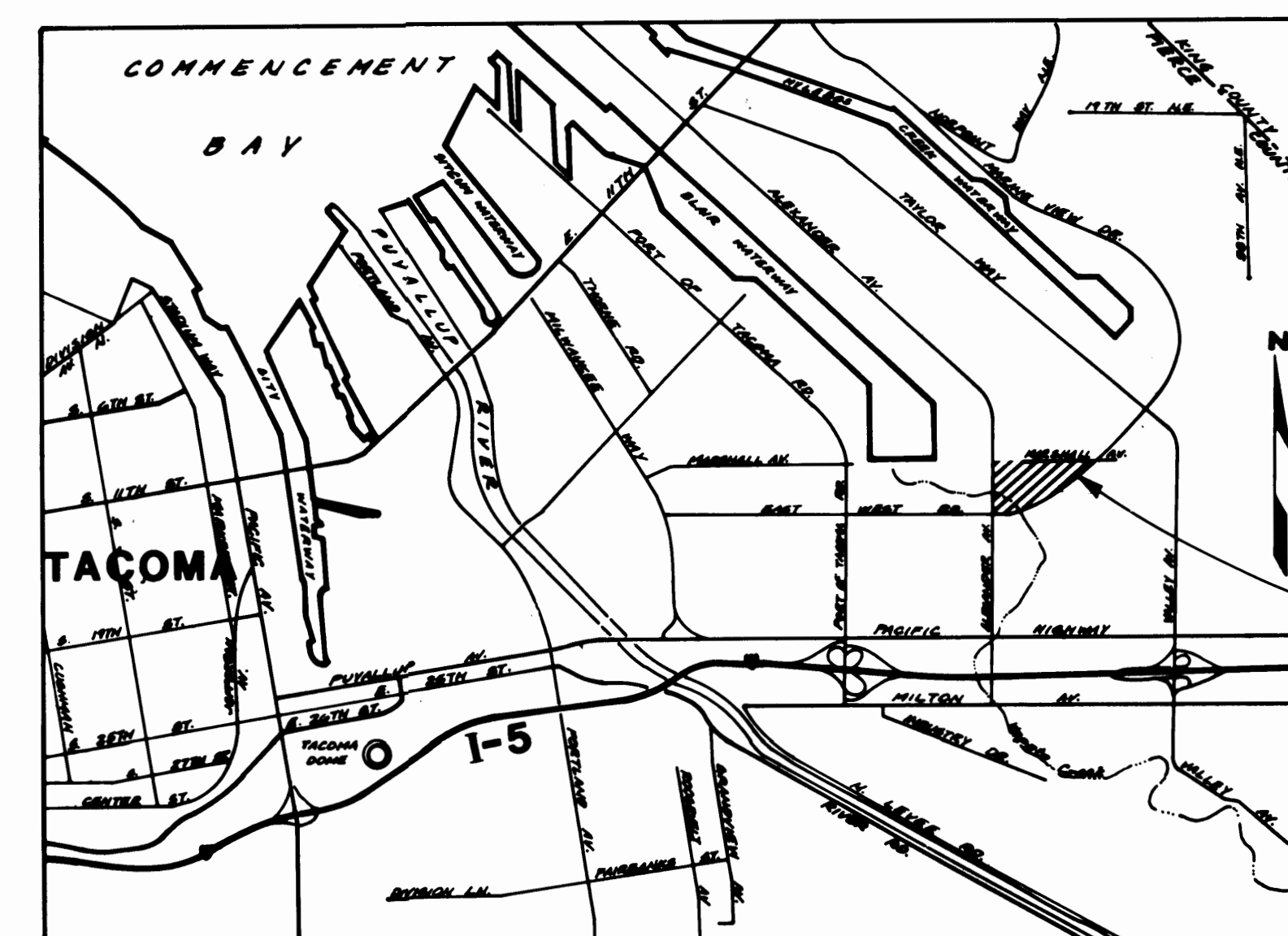
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SUBCONSULTANT

ROSEWATER ENGINEERING (Site Drainage)

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PROJECT LOCATION

VICINITY MAP
Not to Scale



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8/10/88
DATE

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AS-BUILT BY DATE

7/22/88
DATE

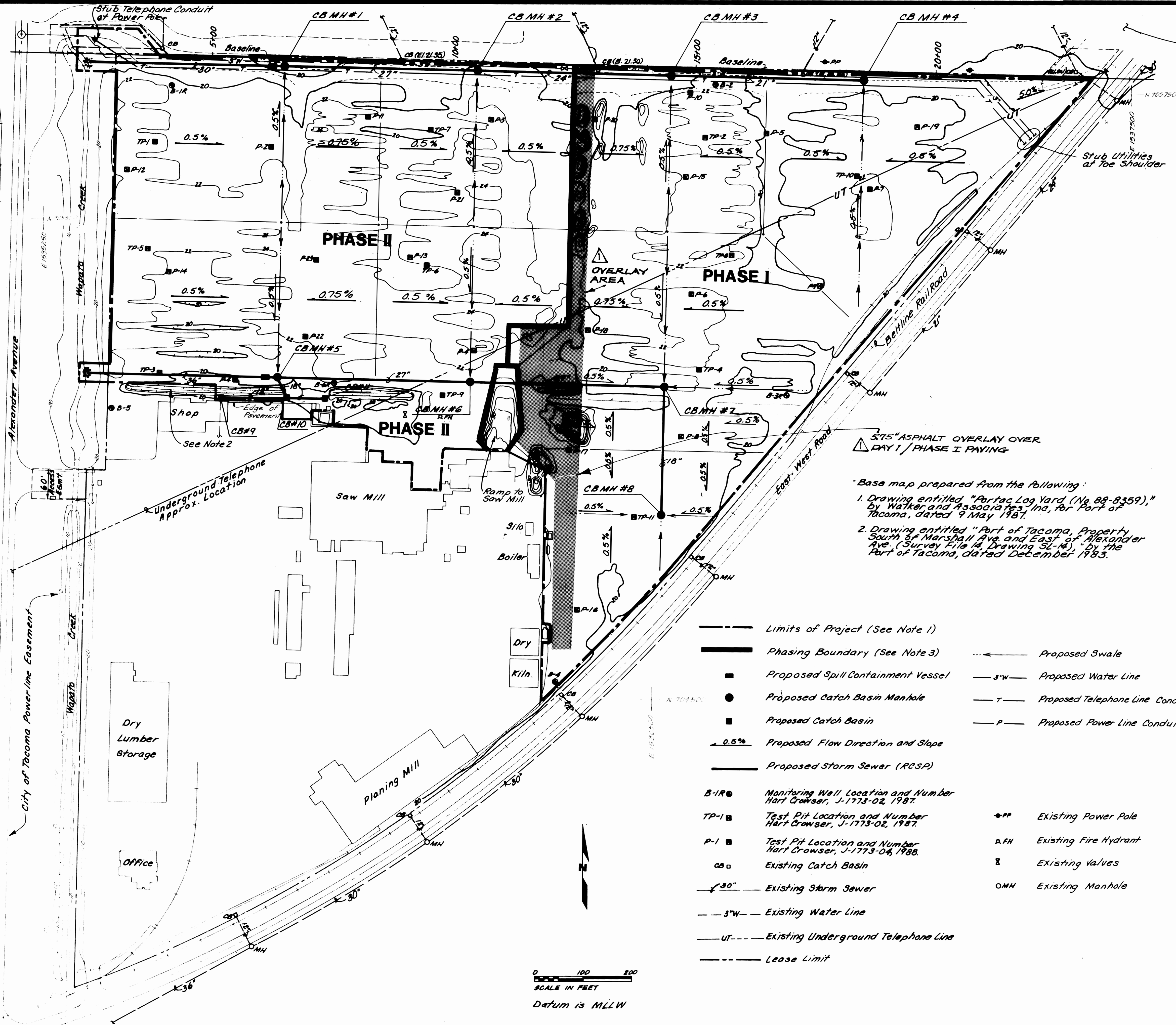
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**PORTAC LOG SORT YARD
PAVING PROJECT - 1988**
COVER SHEET

DRAWING No. **EP-4270-20**
CONTRACT No. **646**
SHEET No. **1** OF **20**



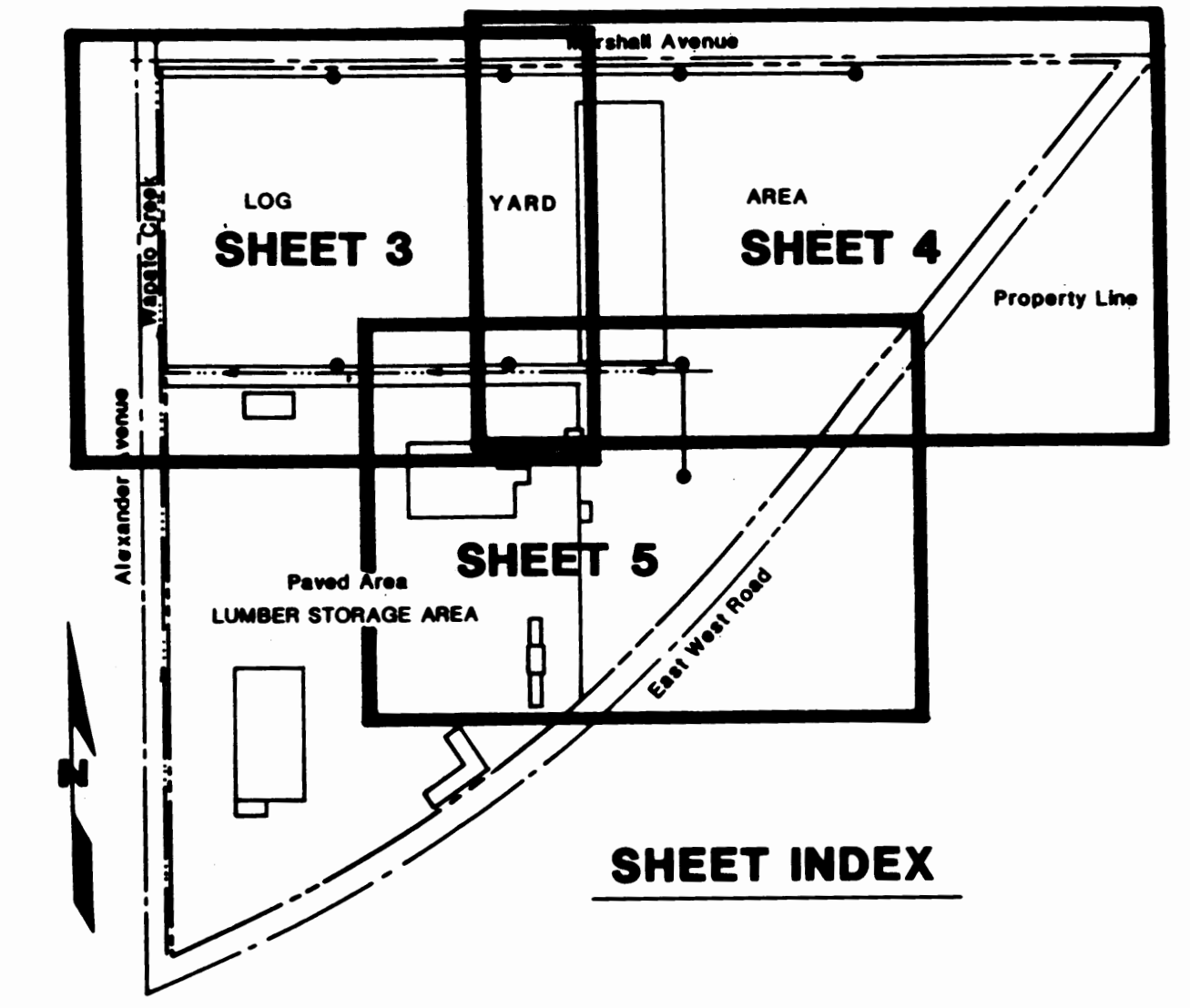
Contractor Laydown Area
See Note 7.

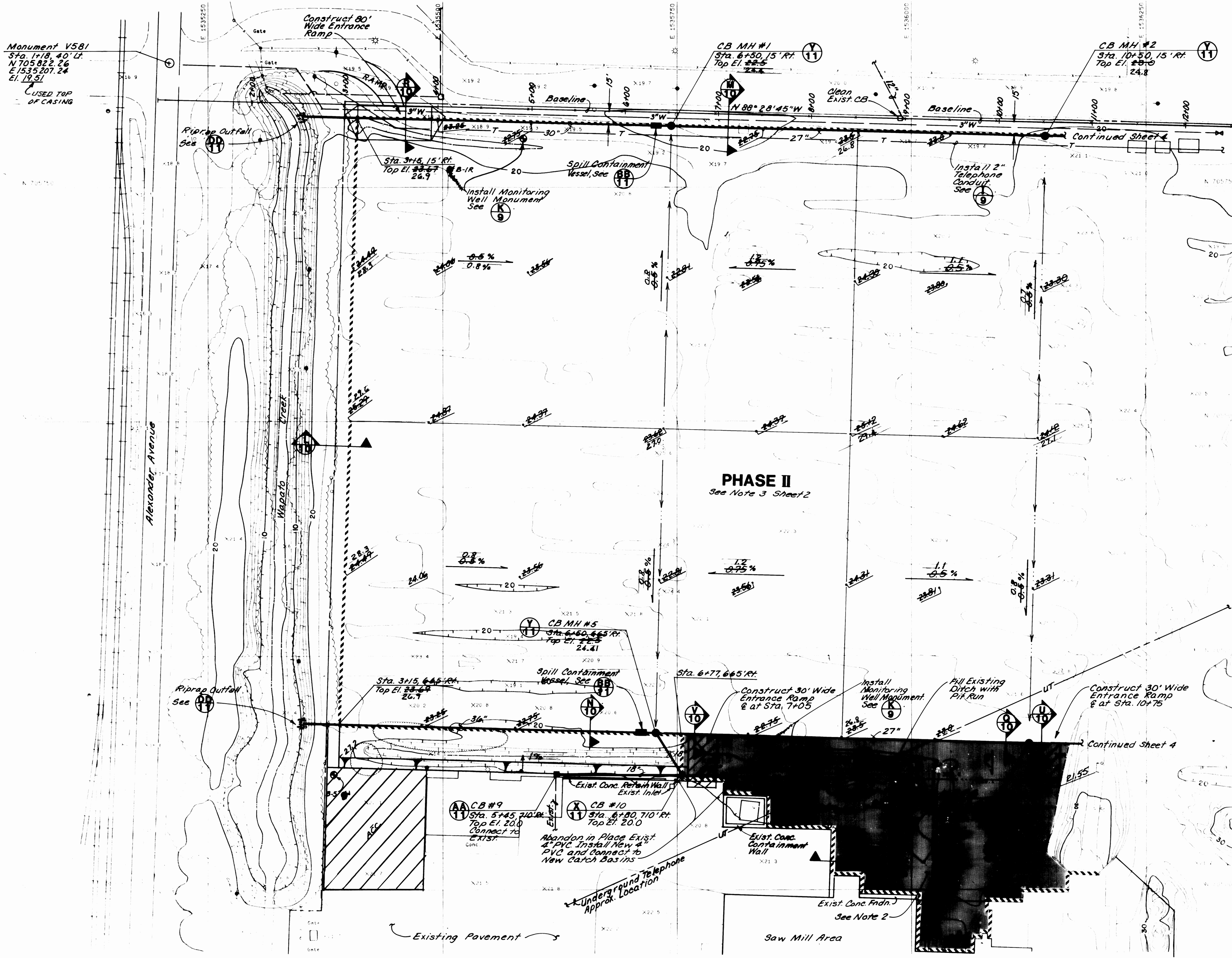
- Notes:**
- Project limits are as indicated on plan. The north boundary of project corresponds to existing fence. The project boundary with the saw mill area generally corresponds to the edge of existing pavement or buildings.
 - Ditch sediments from Wapato Creek outfall to existing culvert (vicinity proposed CBMH #5) are contaminated with Pentachlorophenol. Remediation under separate contract. Contractor shall not enter or disturb this ditch in any way.
 - Construction Sequence:
 - Storm Sewer:
 - Outfall at Wapato Creek to CBMH #2.
 - CBMH #2 to CBMH #4.
 - Maintain access to truck unloading area (between CBMH #2 and Phase Boundary) at all times during weekdays. Log trucks presently enter at the northeast corner and exit at the northwest corner. During construction of the north storm sewer, log trucks will enter and exit through the same point, opposite the current construction.
 - Outfall at Wapato Creek to CBMH #8.
 - Maintain access to ramp to saw mill at all times during weekdays.
 - Utilities
 - Grading and Paving:
 - Phase I: Maintain access to ramp to saw mill from west.
 - Phase II: Begin on west side, not interfering with log yard operations. Log yard operator will vacate Phase II area within 5 working days of completion of curing period of Phase I pavement.
 - Ramp to Saw Mill: May be completed during either phase. Asphalt concrete paving must be completed within 3 days (Saturday through Monday, inclusive). Give log yard operator 5 working days notice prior to commencing operations.
 - Contractor shall verify location of existing utilities prior to digging. Utilities service will be maintained during construction. Any damage to utilities will be repaired at Contractor's expense.
 - Contractor shall maintain existing catch basins in service.
 - Contractor shall maintain existing fire hydrant and valves in service. See J-8.
 - The laydown area includes the area between the Beltline Railroad (on the east) and the chainlink fence (on the west), 200 feet north from the northeast entrance to the log yard.

Base map prepared from the following:

- Drawing entitled "Portac Log Yard (No. 88-8359)," by Walker and Associates, Inc., for Port of Tacoma, dated 9 May 1987.
- Drawing entitled "Part of Tacoma, Property South of Marshall Ave. and East of Alexander Ave. (Survey File 14, Drawing 52-14)," by the Port of Tacoma, dated December 1983.

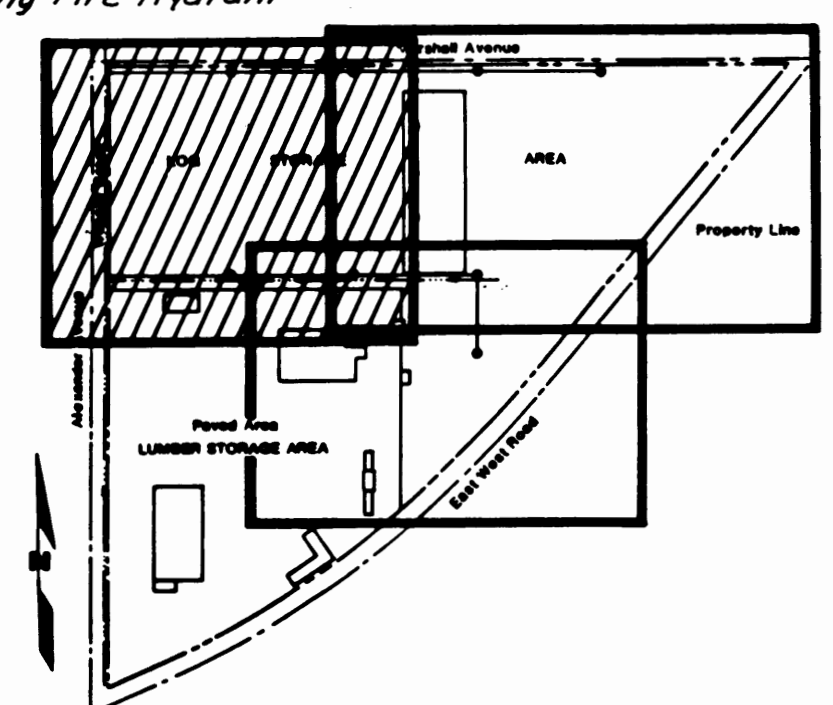
- | | |
|--|-------------------------------------|
| --- Limits of Project (See Note 1) | --- Proposed Swale |
| --- Phasing Boundary (See Note 3) | --- Proposed Water Line |
| ■ Proposed Spill Containment Vessel | --- Proposed Telephone Line Conduit |
| ● Proposed Catch Basin Manhole | --- Proposed Power Line Conduit |
| ■ Proposed Catch Basin | |
| 0.5% Proposed Flow Direction and Slope | |
| --- Proposed Storm Sewer (RCS) | |
| B-IR ● Monitoring Well Location and Number
Hart Crowser, J-1773-02, 1987. | ● Existing Power Pole |
| TP-1 ■ Test Pit Location and Number
Hart Crowser, J-1773-02, 1987. | ● Existing Fire Hydrant |
| P-1 ■ Test Pit Location and Number
Hart Crowser, J-1773-04, 1988. | ● Existing Valves |
| CB ■ Existing Catch Basin | ● Existing Manhole |
| 30" Existing Storm Sewer | |
| 3"W Existing Water Line | |
| UT --- Existing Underground Telephone Line | |
| --- Lease Limit | |

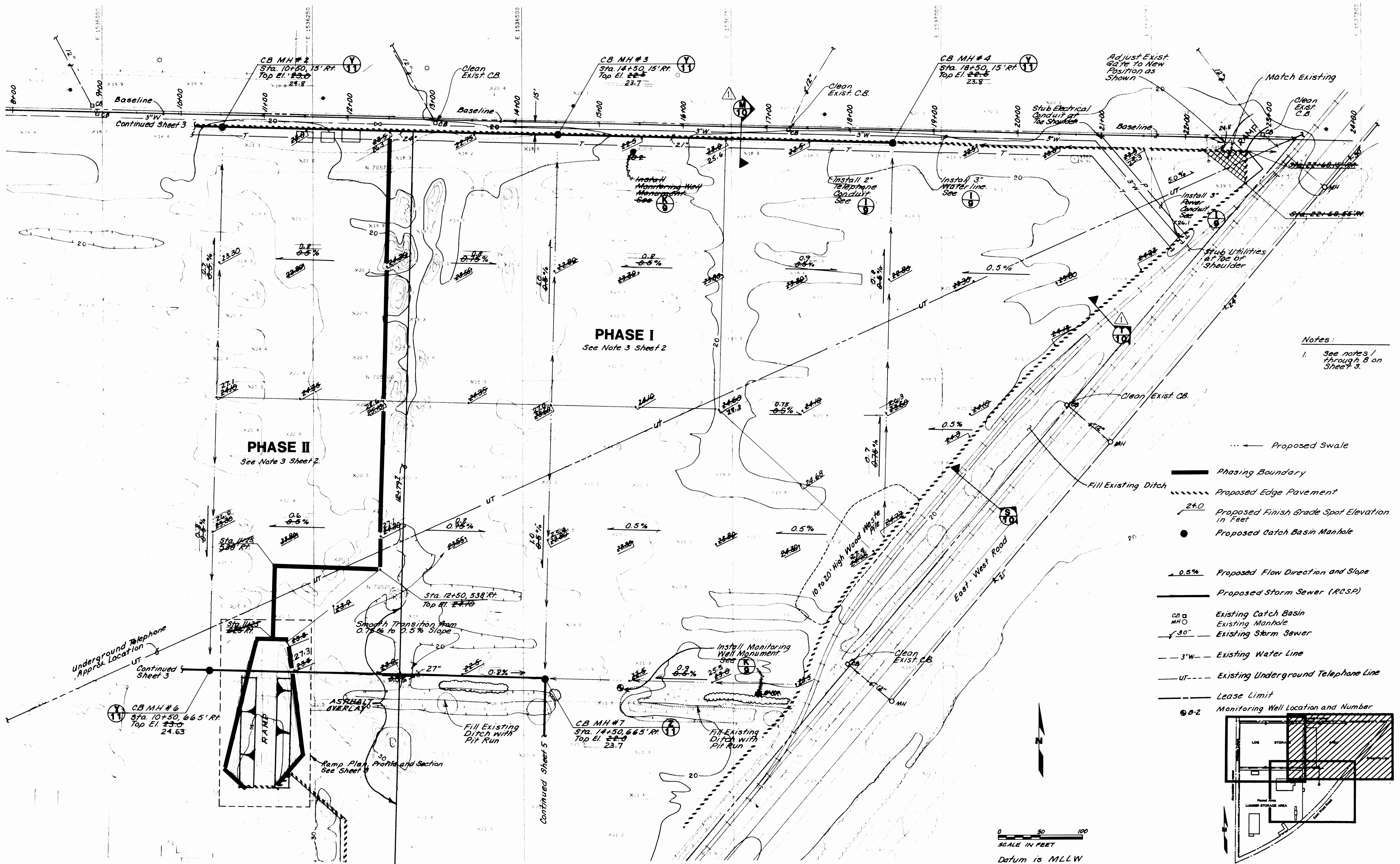




- Notes:
1. For typical log yard pavement section, see (A).
 2. For typical saw mill pavement section (shaded portion), see (B).
 3. For RCC pavement joints, see (C) and (D).
 4. Contractor shall verify location of existing utilities prior to digging. Utilities service will be maintained during construction. Any damage to utilities will be repaired at contractor's expense.
 5. Contractor shall maintain existing catch basins in service.
 6. Contractor shall maintain existing fire hydrant and valves in service. See (E).
 7. This site was originally constructed of ASARCO slag placed on native material. The original site was graded to specified elevations, compacted, and approximately 15 inches of slag was placed on prepared subgrade.
The work is to occur in two phases and the phases shall occur basically independent of each other (except for site drainage). Therefore, it is the contractor's responsibility to shape the existing bark material for the drainage patterns so as to insure that no bark/slag material is removed from the site and that the proper drainage patterns occur as shown.
It should be noted that the final elevations may vary from what is shown. The intent is to balance the cut and fill so as to insure drainage, and then place the structural pavement sections as shown. It shall be the contractor's responsibility to determine the cuts and fills. The drainage slopes may be no steeper than +0.5% from those shown.
Under no circumstances is the Contractor to cut below the base of the existing bark/slag mixture into either unmixed slag or native material unless approved by the Engineer. Prior to the placement of structural material, the Contractor shall submit his final grading plan to be approved by the Engineer.
The Contractor may elect to place all excavated pipe material in Phase I construction and shall incorporate this material into the bark/slag mixture so as to insure a homogeneous mixture of all materials.
 8. Center-line stormsewer corresponds to edge pavement where shown as superimposed alignment.

- Legend:
- Typical Saw Mill Pavement Section. See Note 2.
 - Proposed Edge Pavement
 - Proposed Swale
 - Proposed Finish Grade Spot Elevation in feet
 - Proposed Spill Containment Vessel
 - Proposed Catch Basin Manhole
 - Proposed Catch Basin
 - Proposed Flow Direction and Slope
 - Proposed Storm Sewer (RCSF)
 - Existing Catch Basin
 - Existing Storm Sewer
 - Existing Water Line
 - Existing Underground Telephone Line
 - Monitoring Well Location and Number
 - Lease Limit
 - Existing Fire Hydrant
 - Existing Valve





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3/10/88
DATE

7/22/88
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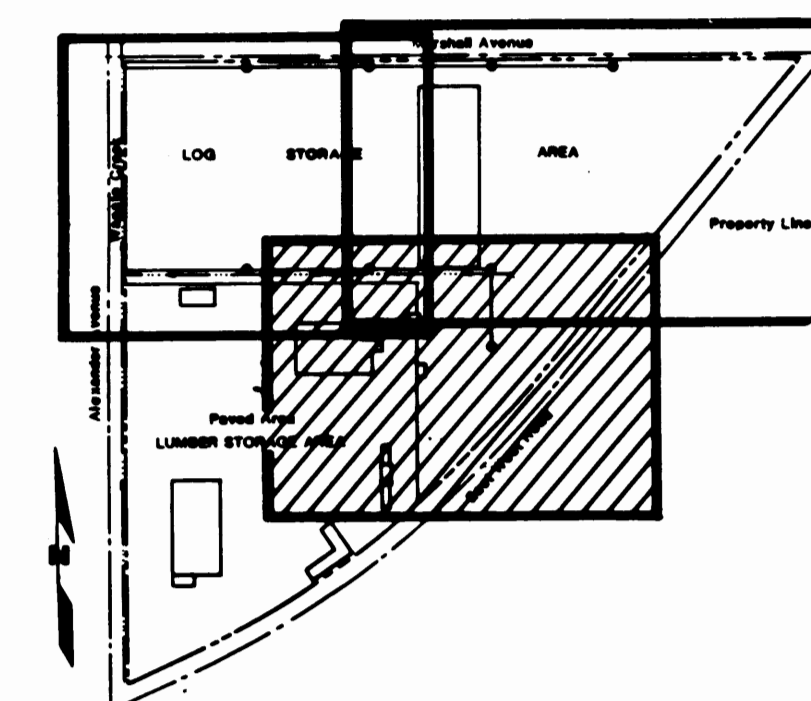
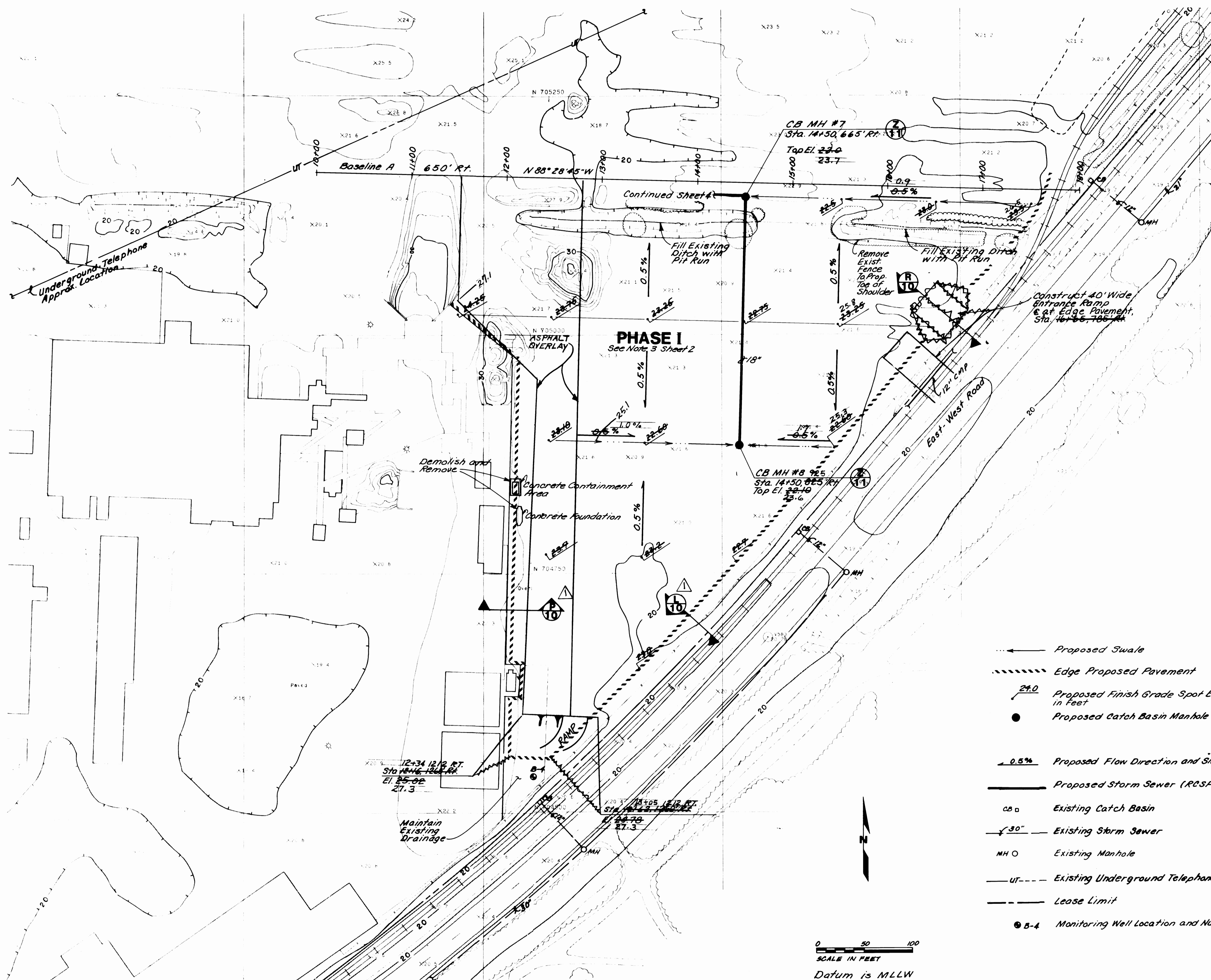
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**PORTAC LOG SORT YARD
PAVING PROJECT - 1988
PAVING, GRADING
AND DRAINAGE PLAN**

DRAWING No. **EP-4270-20**
CONTRACT No. **646**
SHEET No. **4** OF **20**

Notes:
1. See notes 1 through 8 on Sheet 3.



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8-10-88
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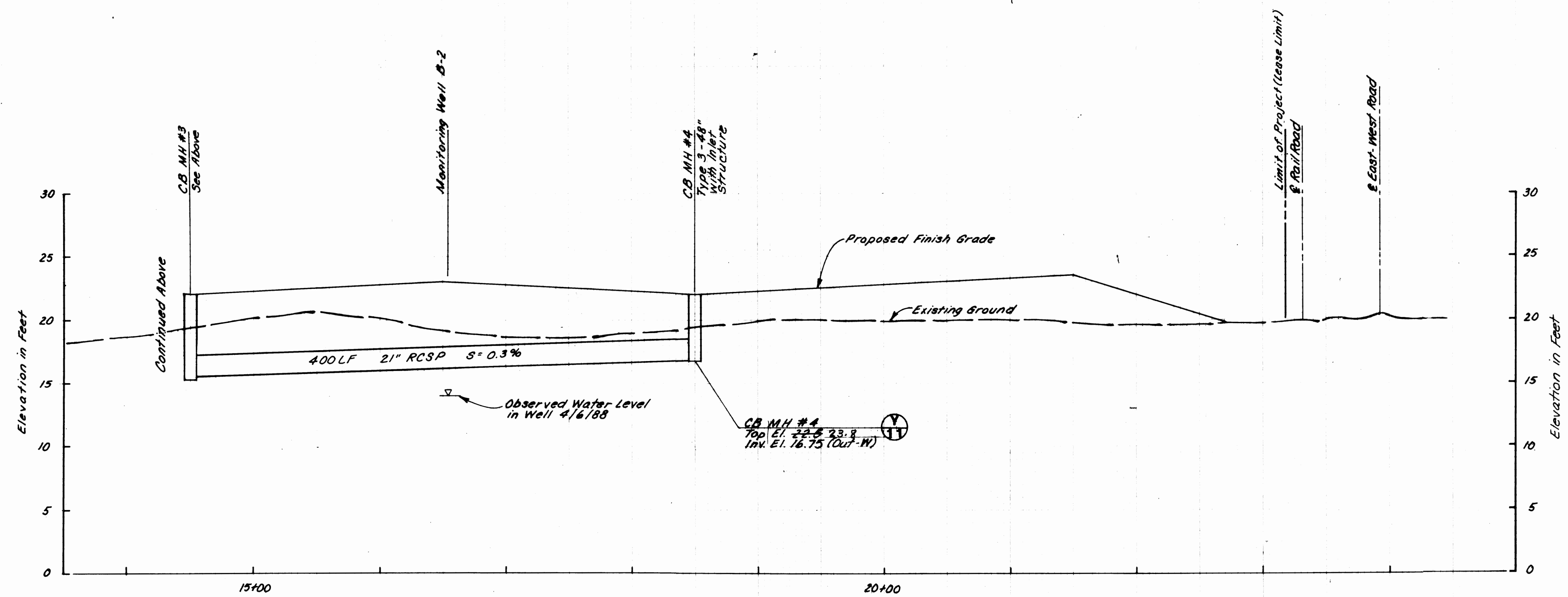
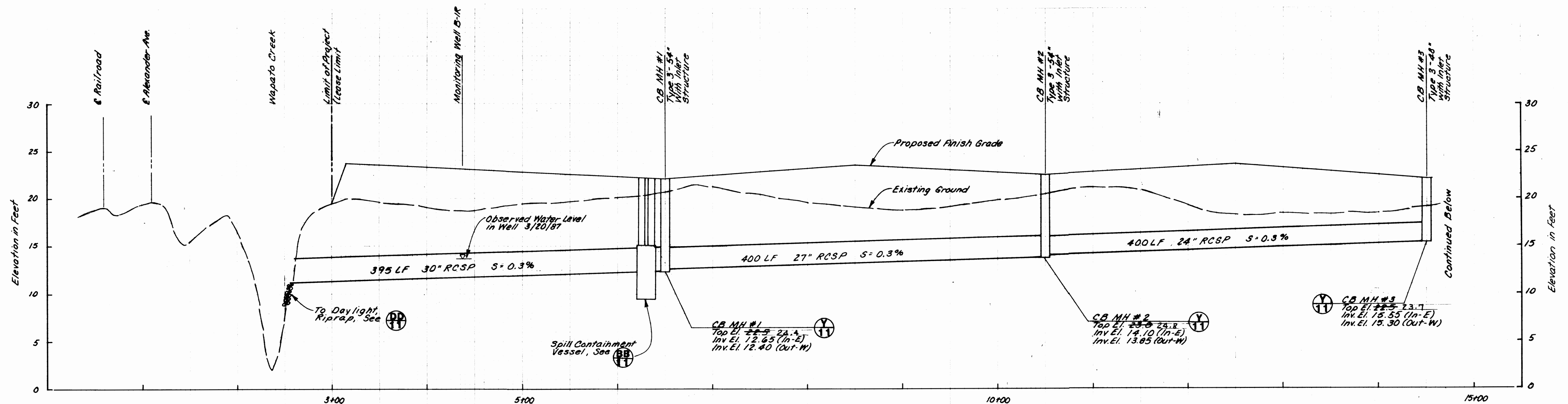
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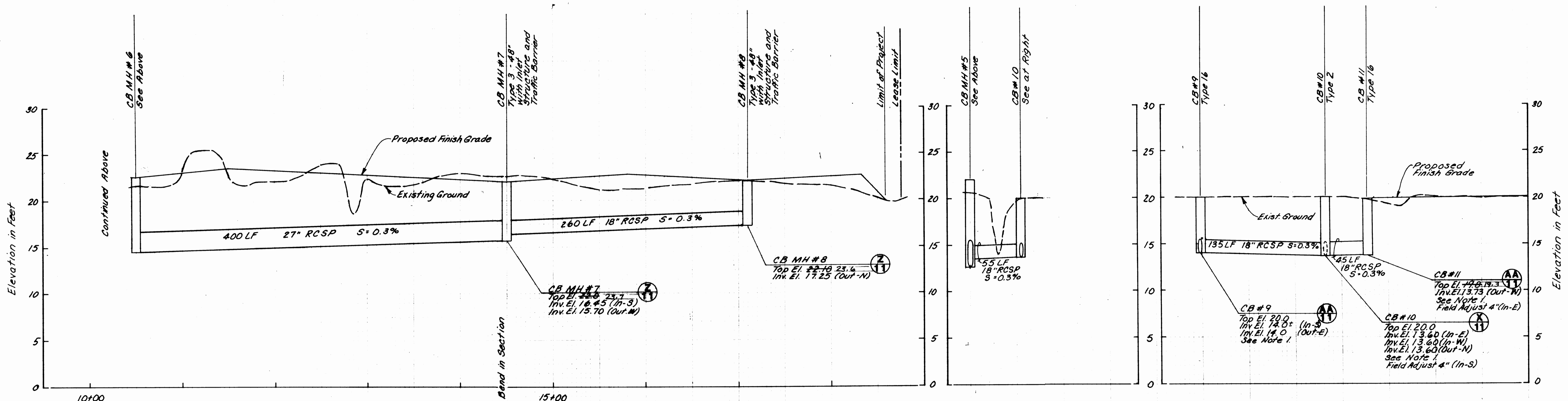
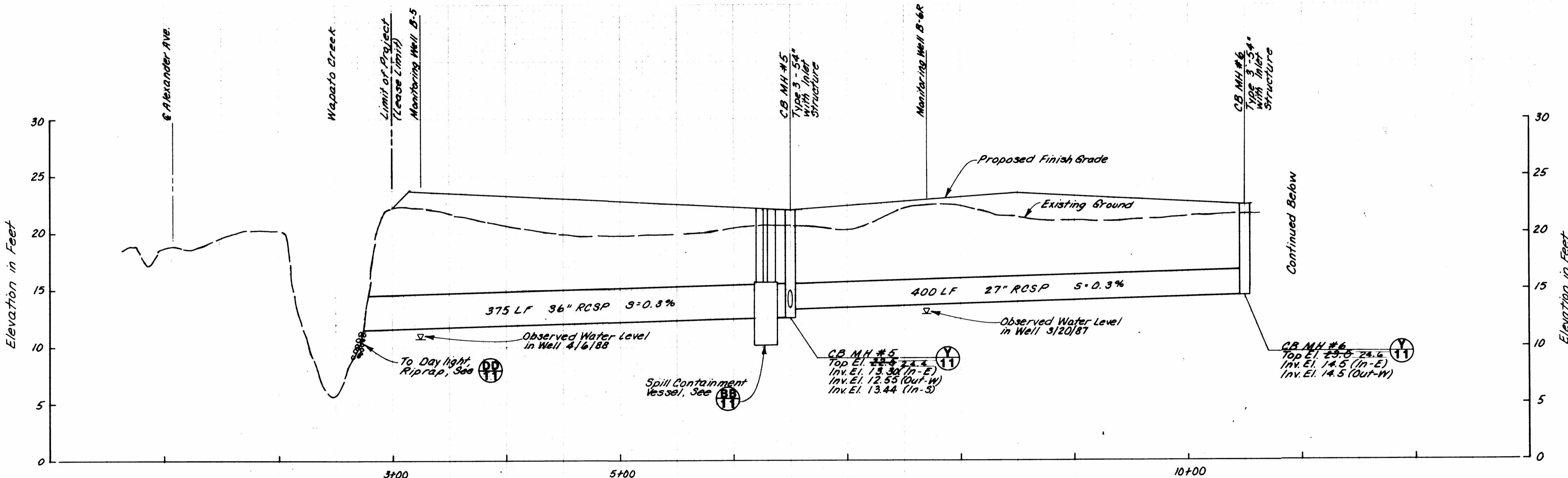
**PORTAC LOG SORT YARD
PAVING PROJECT - 1988
PAVING, GRADING
AND DRAINAGE PLAN**

DRAWING No. **EP-4270-20**
CONTRACT No. **646**
SHEET No. **5** OF **20**

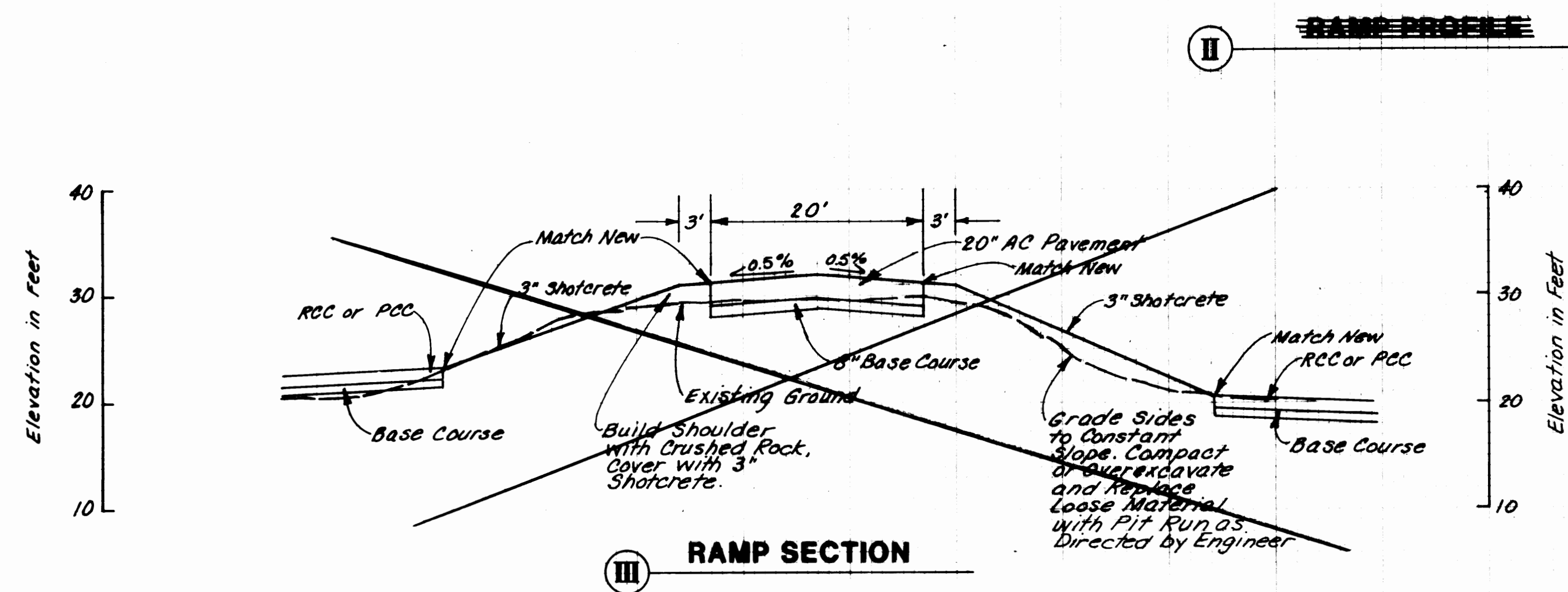
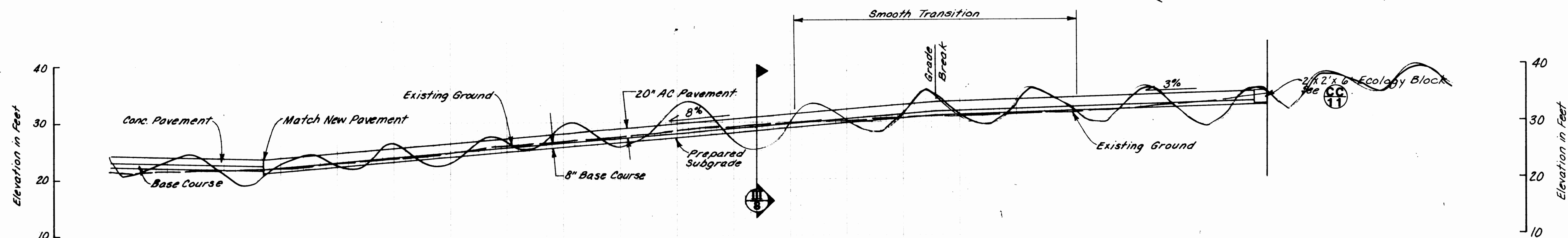
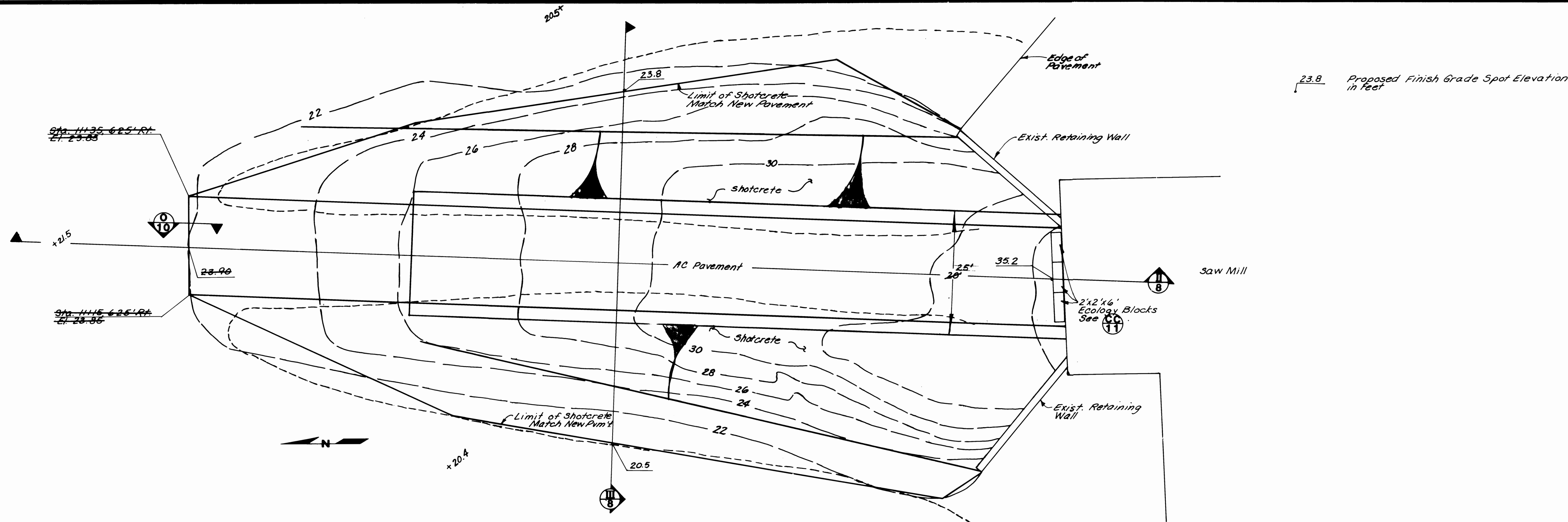


Datum is MLLW
 Horizontal Scale in Feet
 0 50 100
 Vertical Scale in Feet
 0 5 10
 Vertical Exaggeration x 10

Notes:
 1. Existing storm sewer invert elevation is approximate. Adjust inverts at catch basins 5, 9, 10, and 11 to achieve slope as shown from existing storm sewers.



Datum is MLLW
 Horizontal Scale in Feet
 0 50 100
 Vertical Scale in Feet
 0 5 10
 Vertical Exaggeration x 10



Datum is MLLW

Horizontal Scale in Feet
0 10 20
Vertical Scale in Feet
0 10 20



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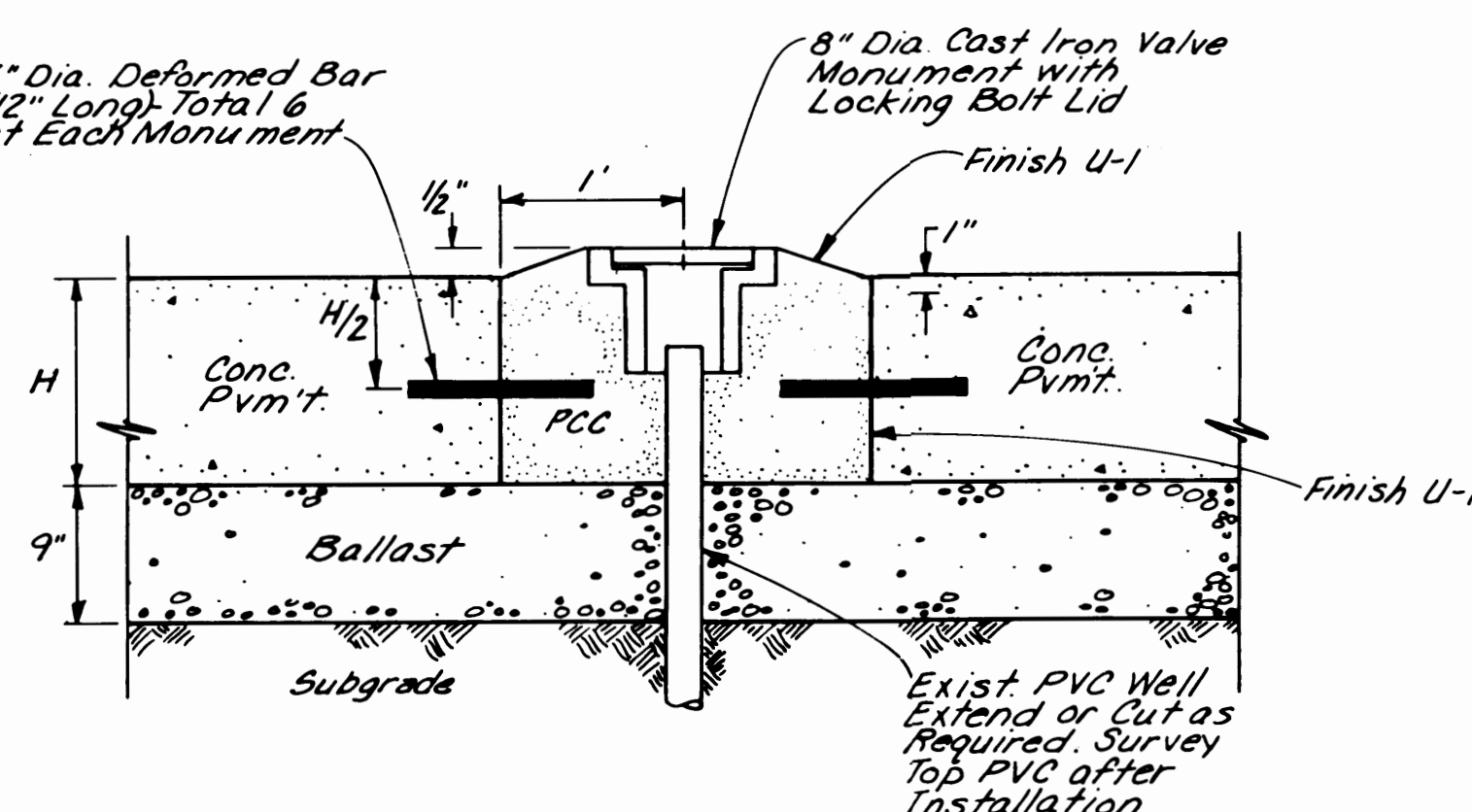
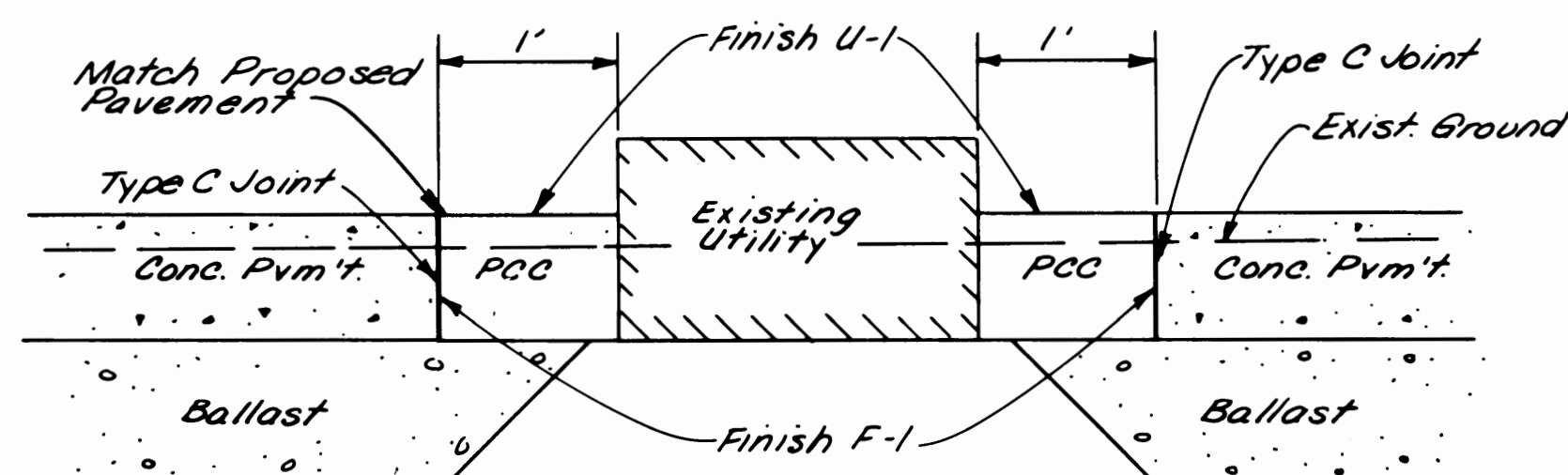
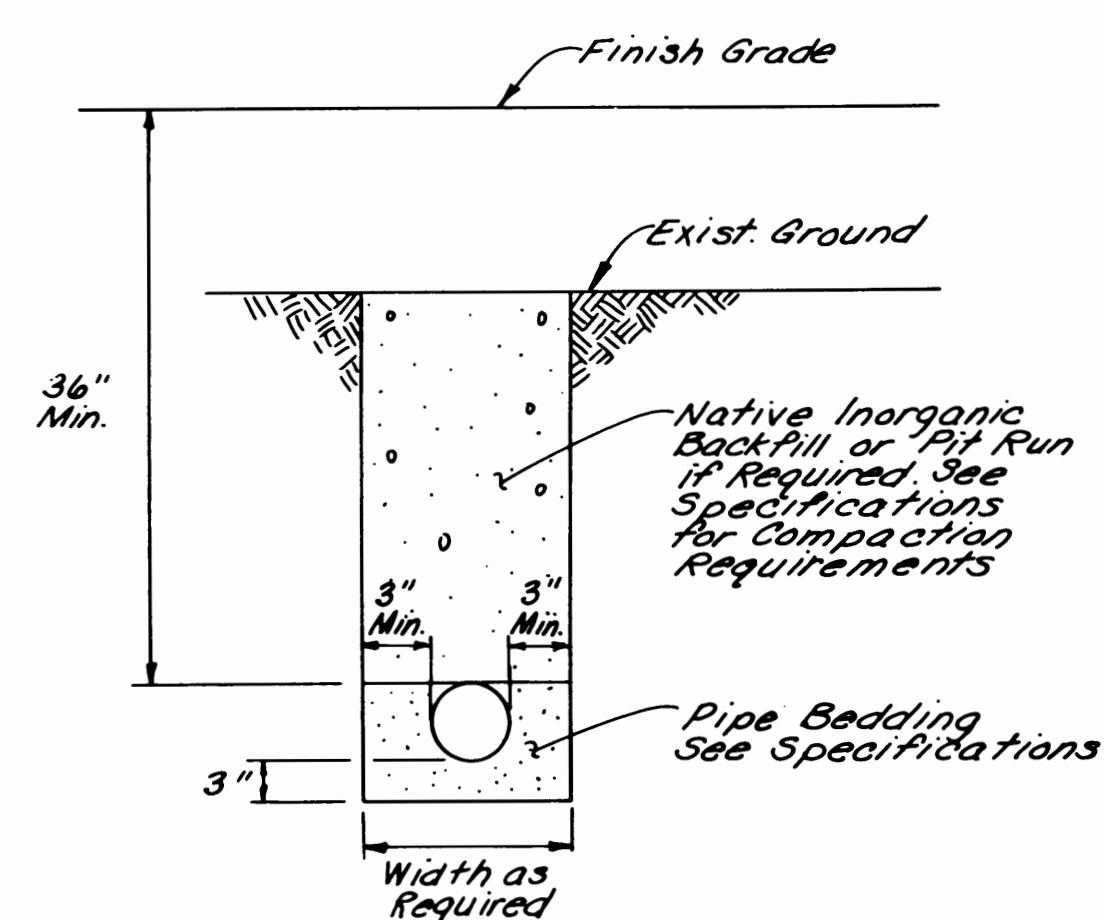
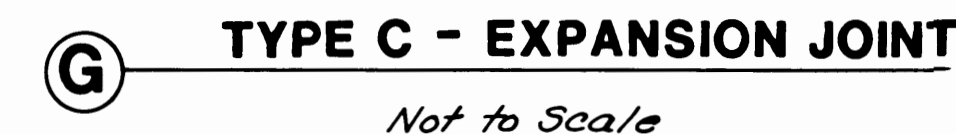
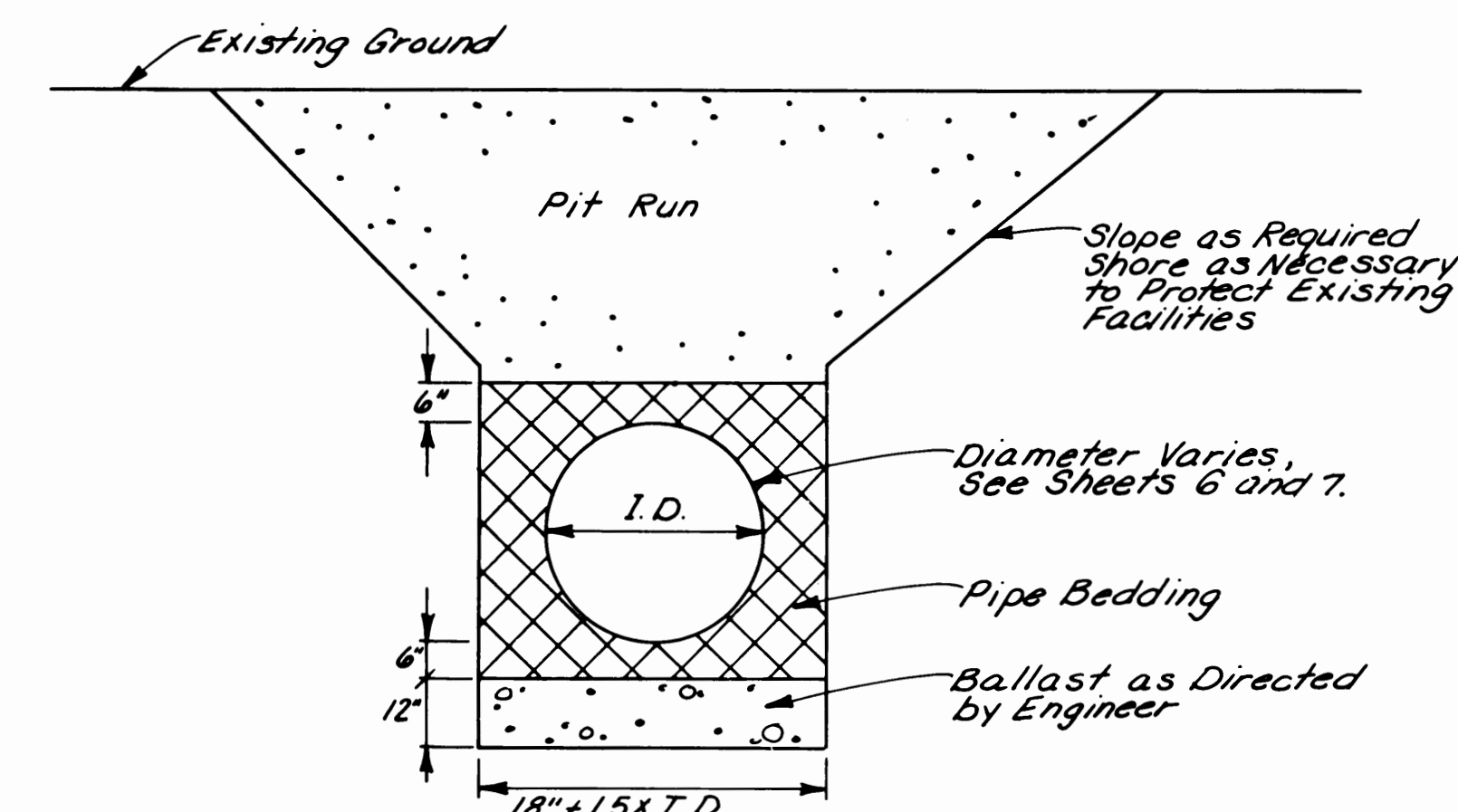
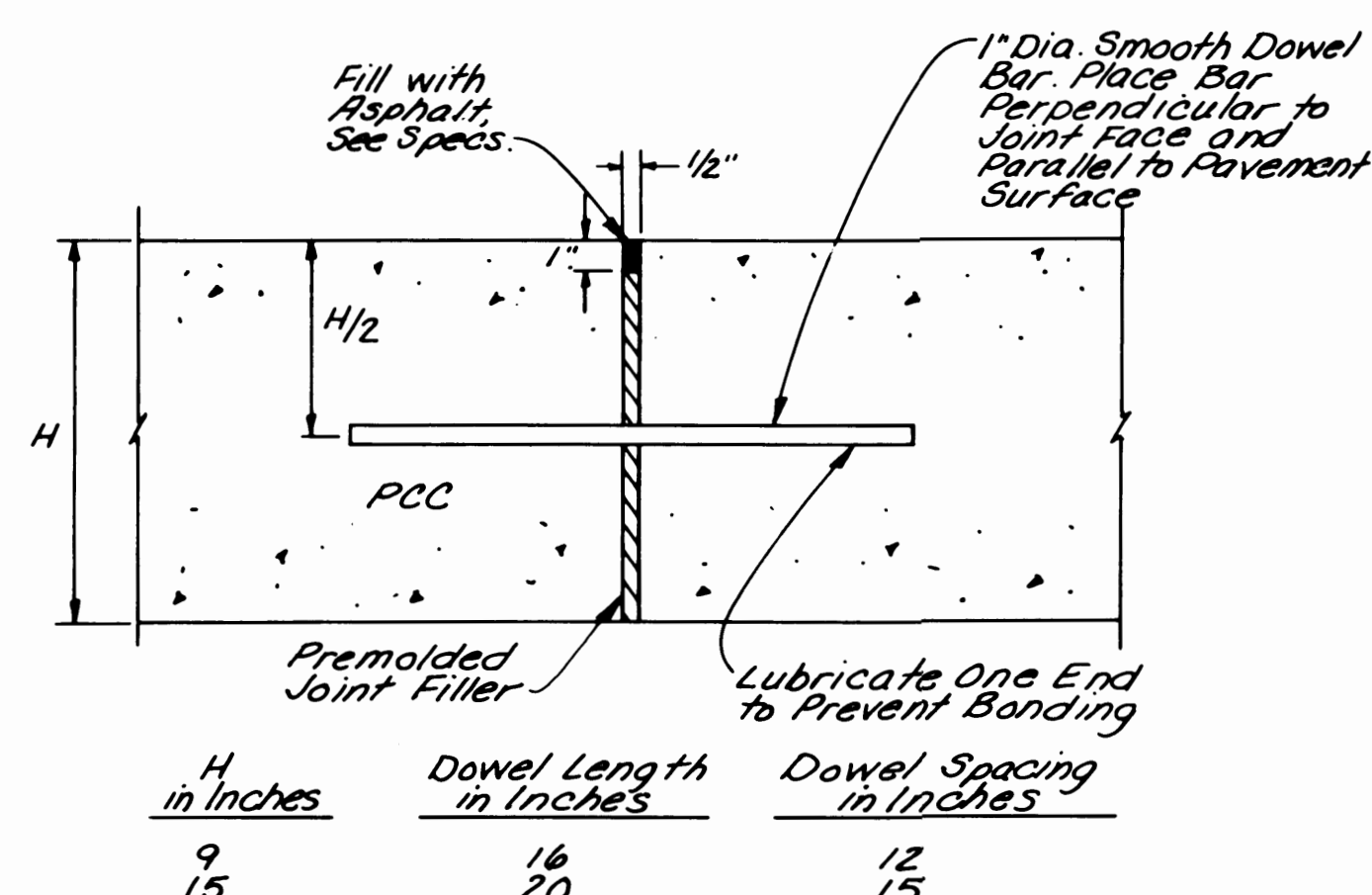
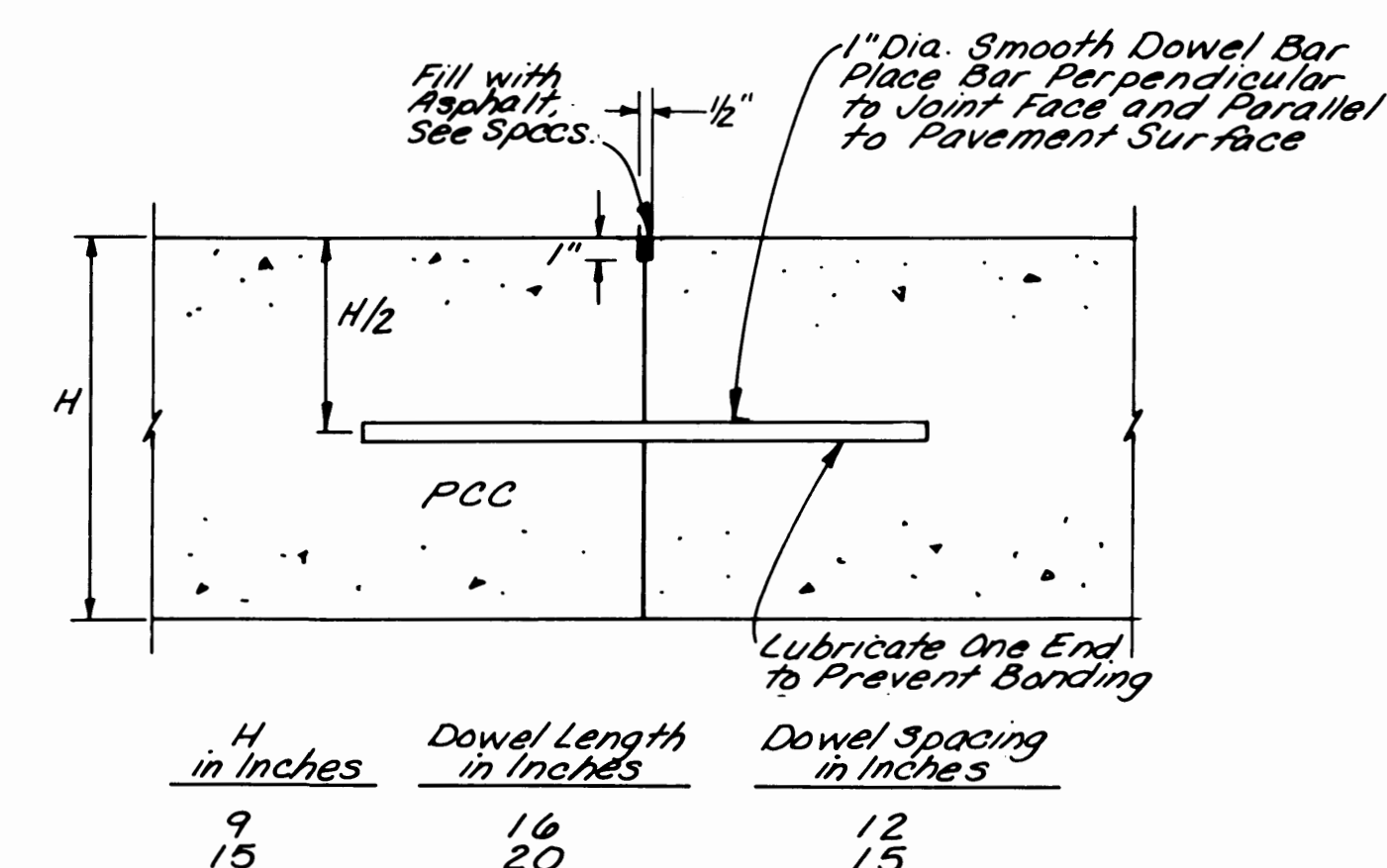
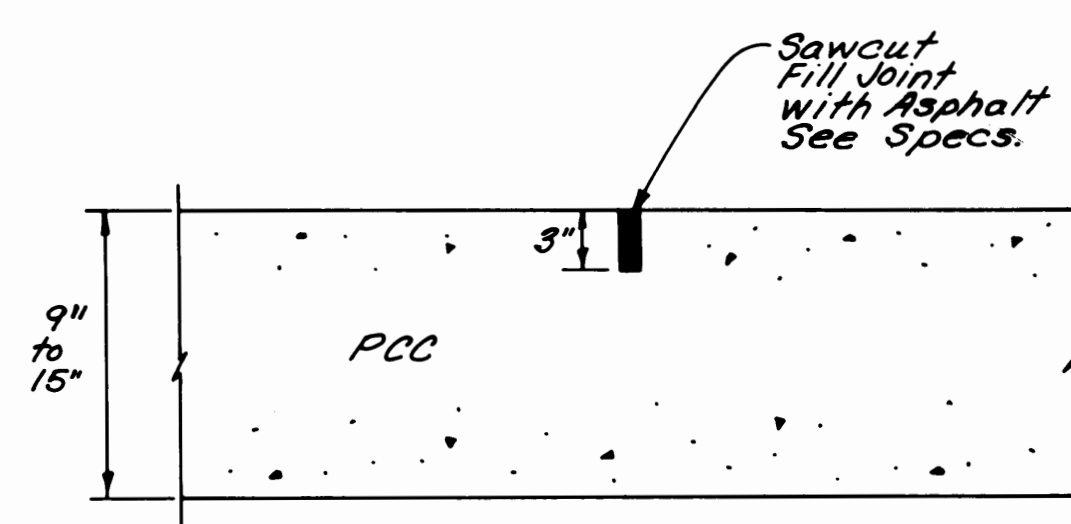
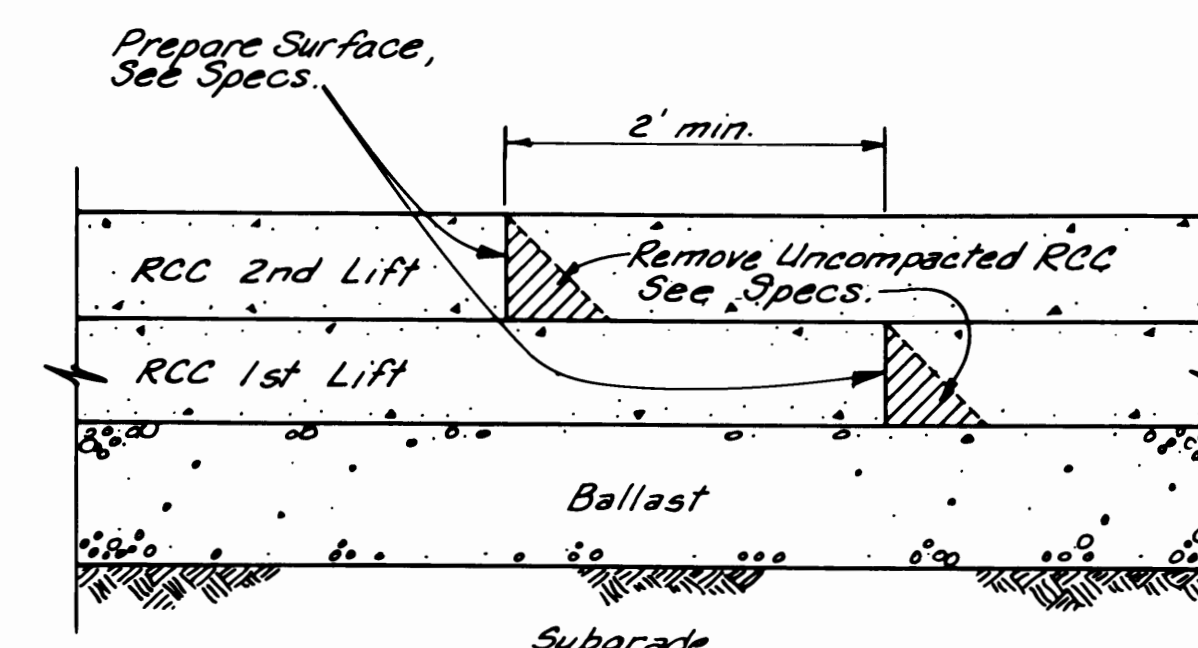
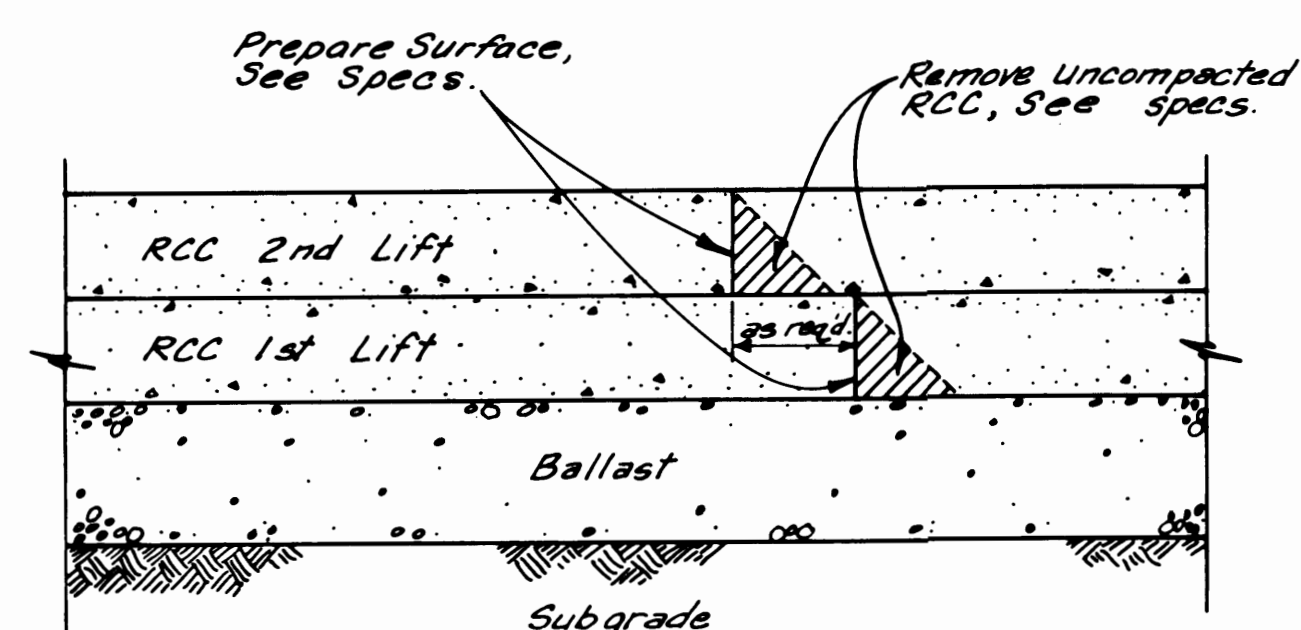
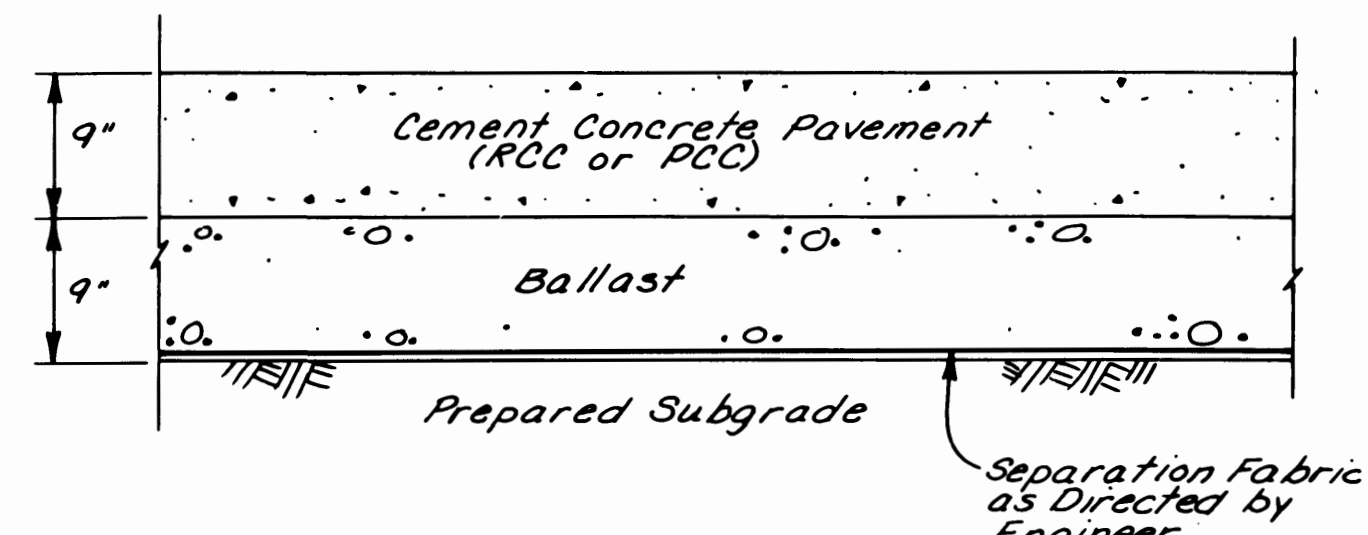
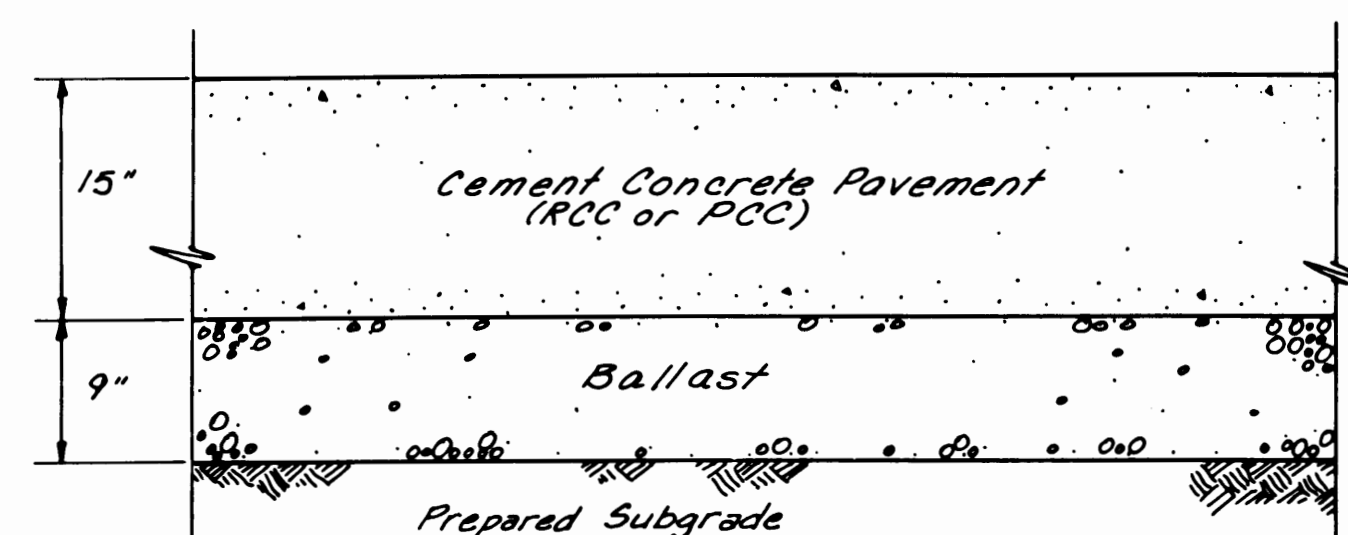
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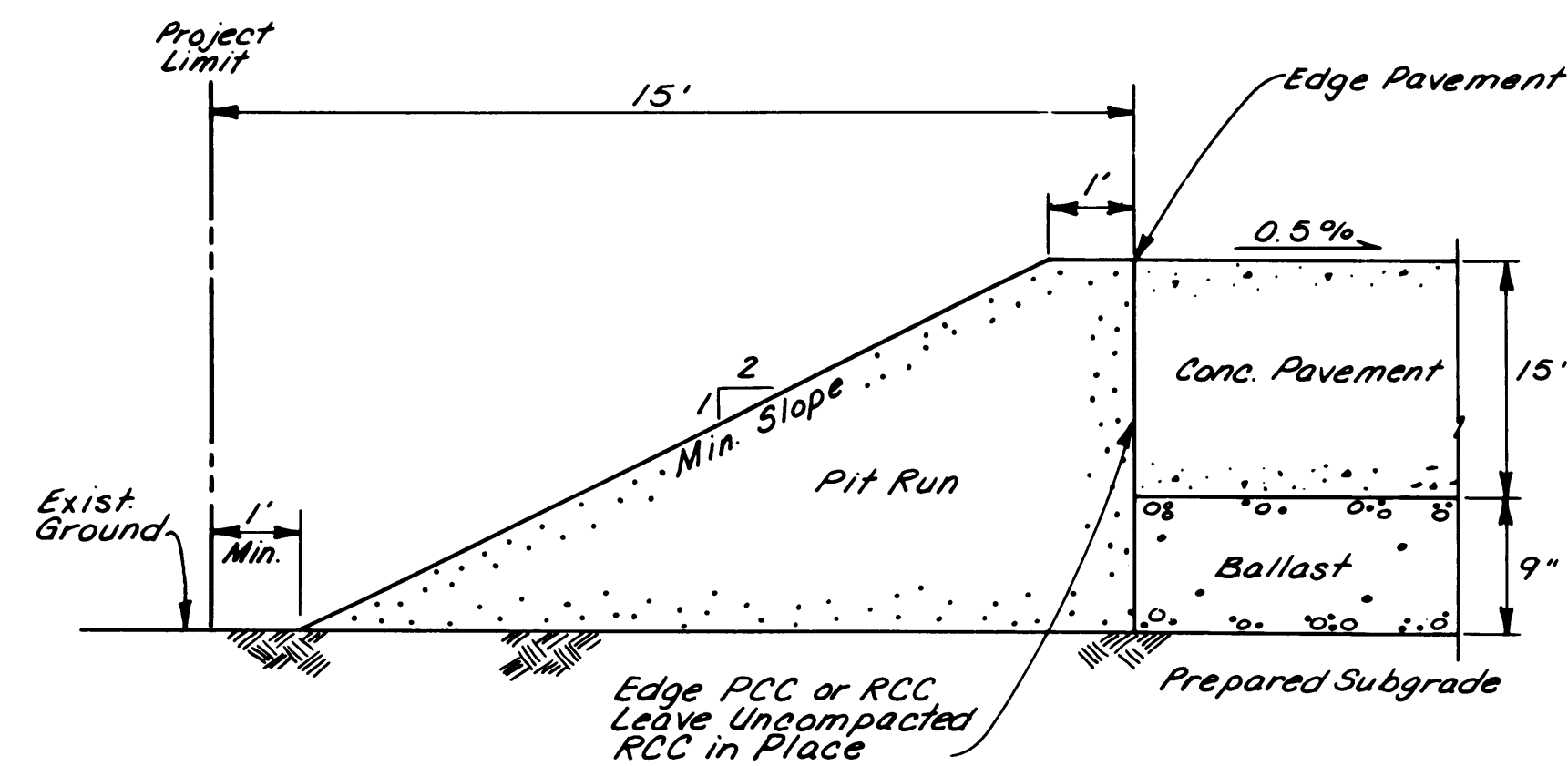
**PORTAC LOG SORT YARD
PAVING PROJECT - 1988
RAMP TO SAW MILL PLAN,
PROFILE AND SECTION**

DRAWING No. **EP-4270-20**
CONTRACT No. **646**
SHEET No. **8** OF **20**

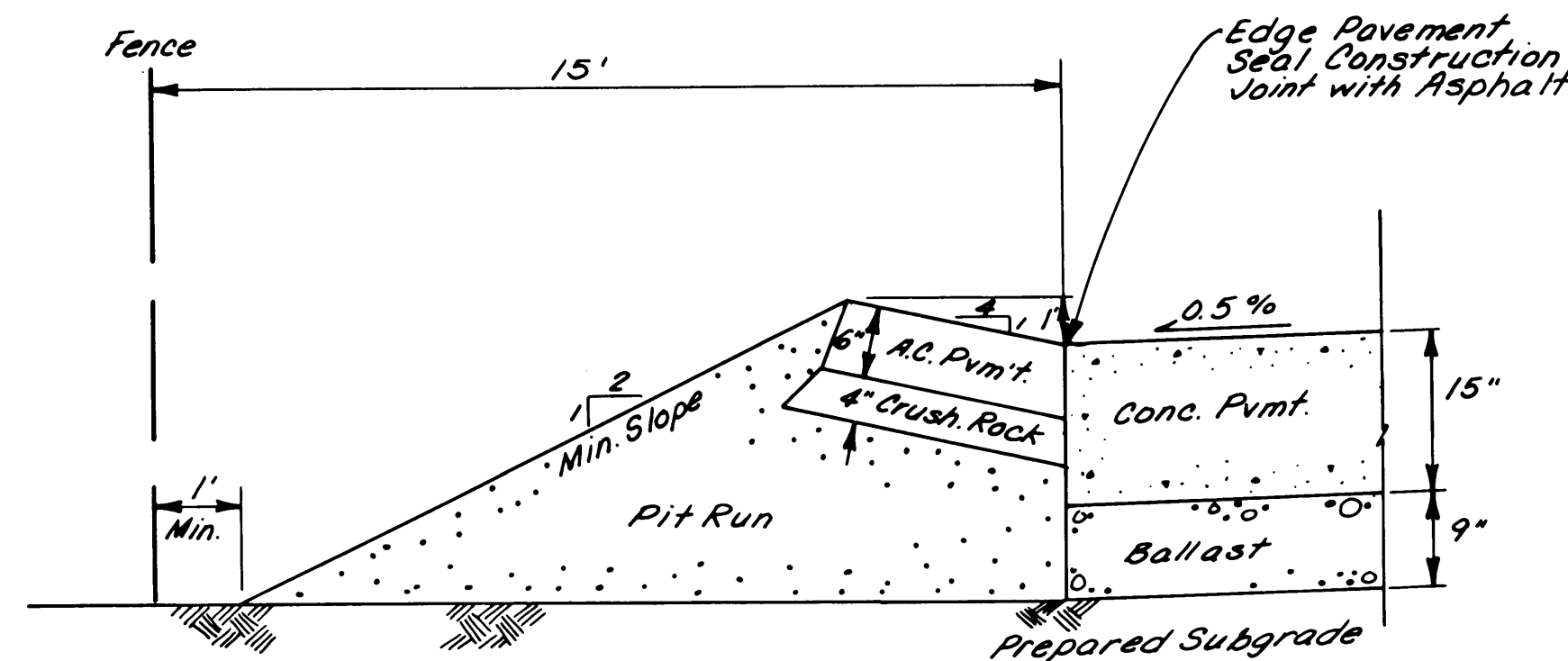


Note: Install Utilities per Applicable Code and with the Minimum Requirements Shown. Include Pull Boxes as Required.

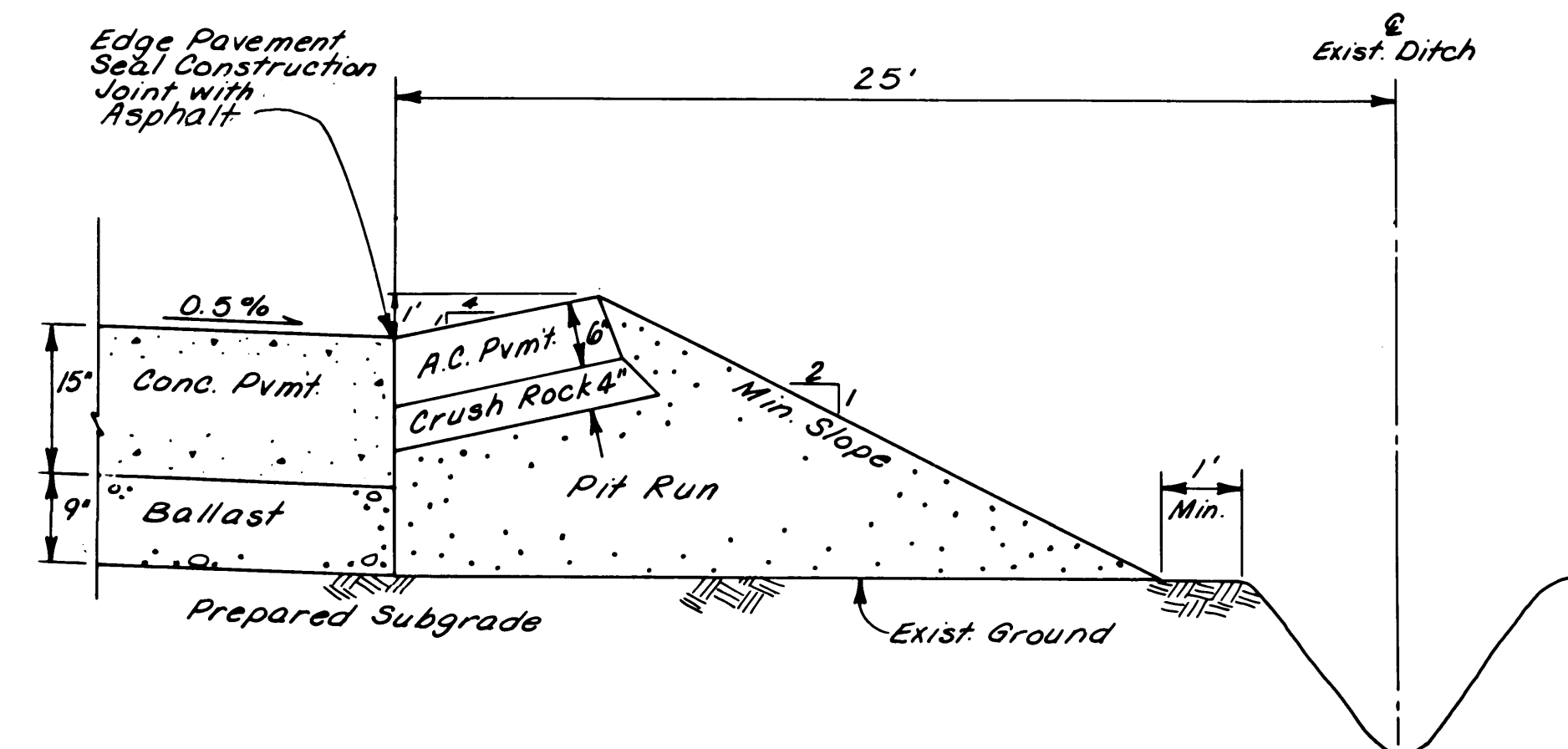
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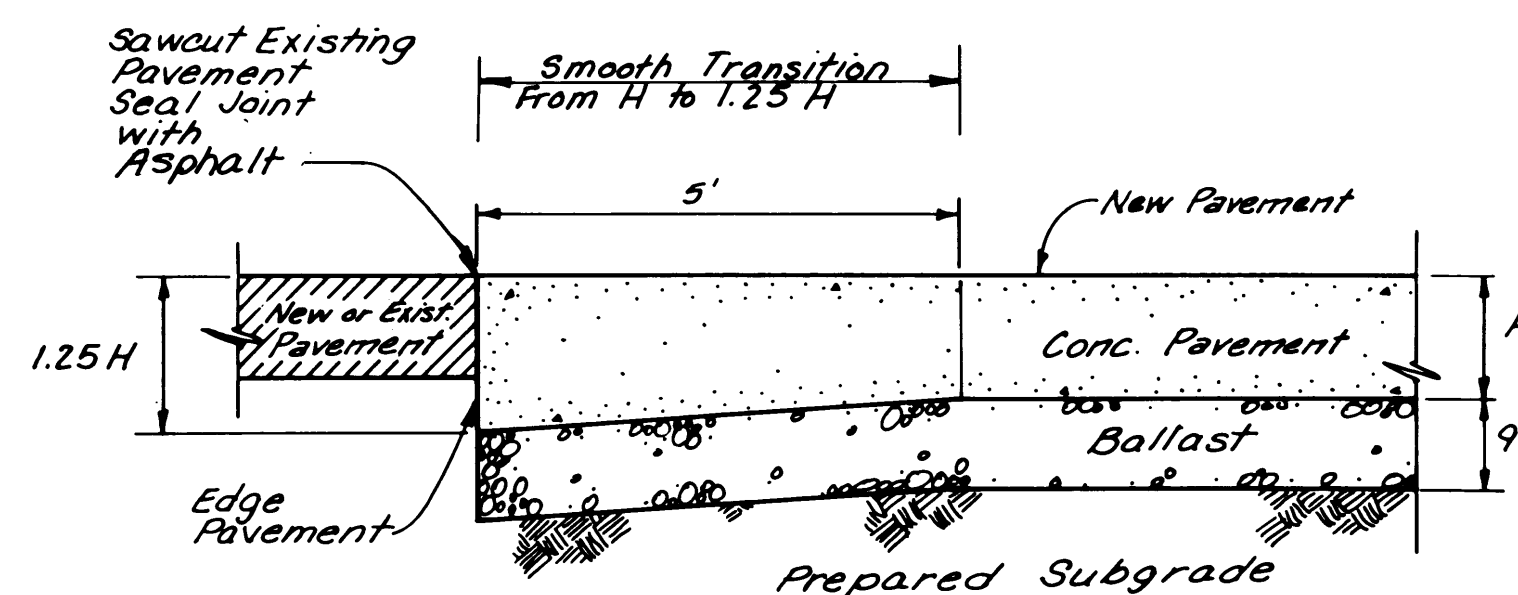
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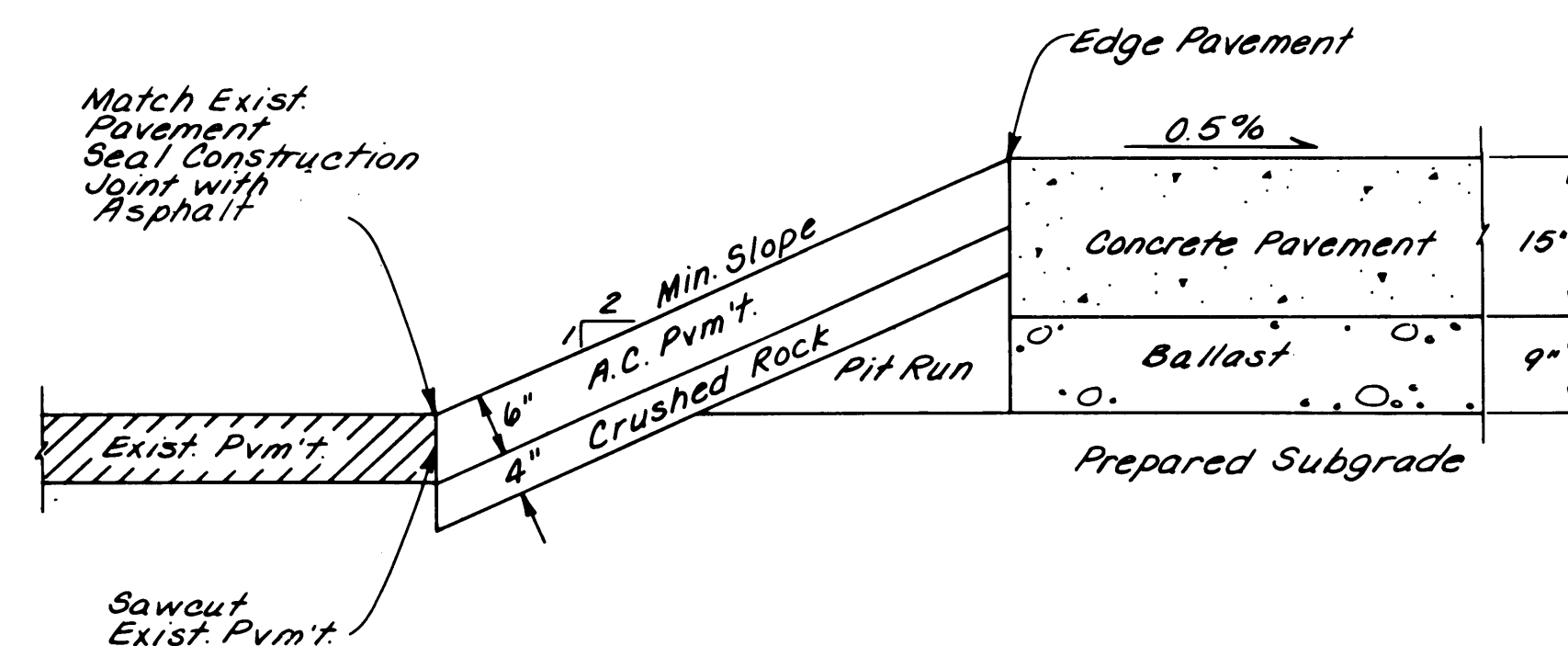
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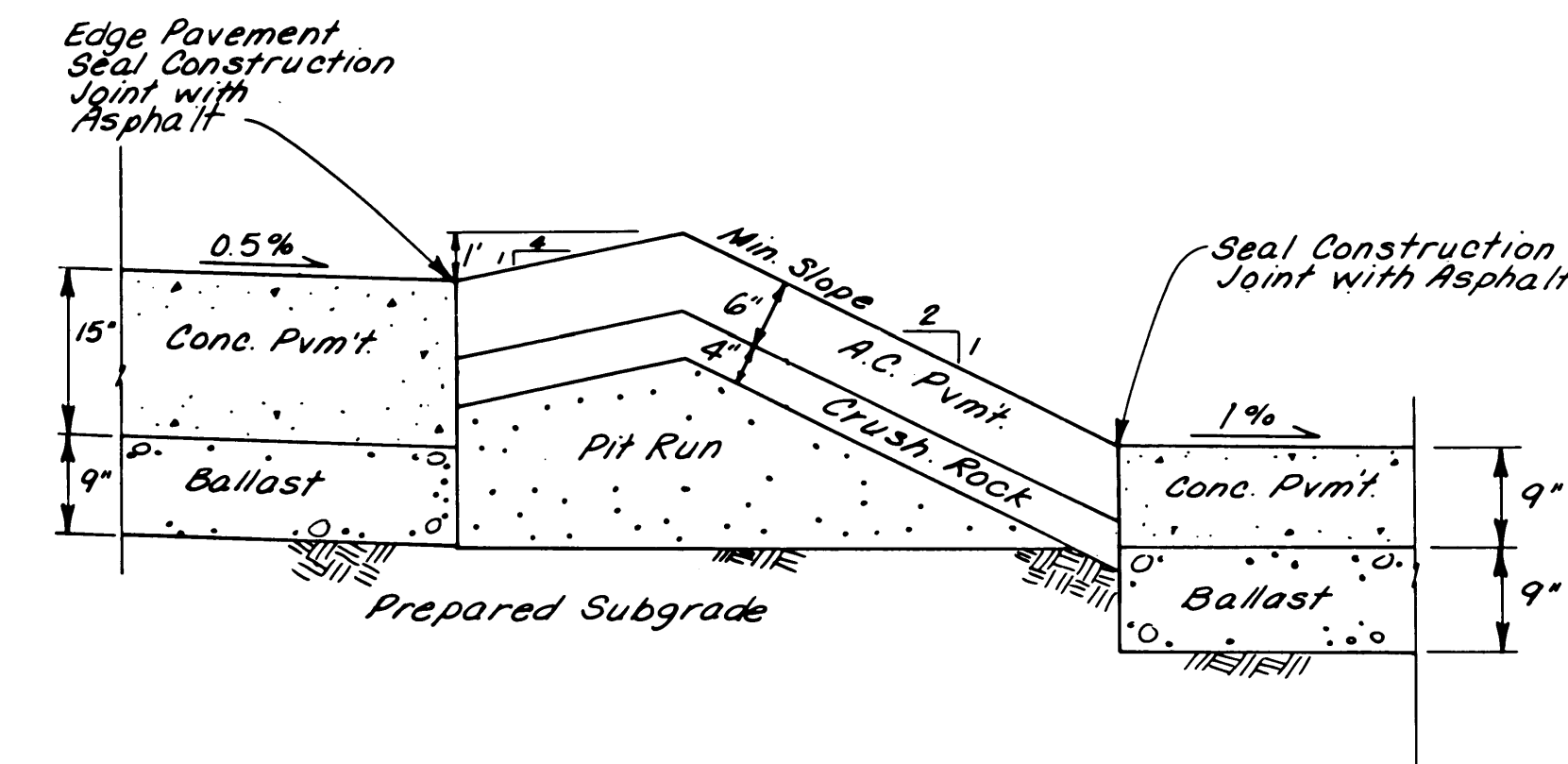
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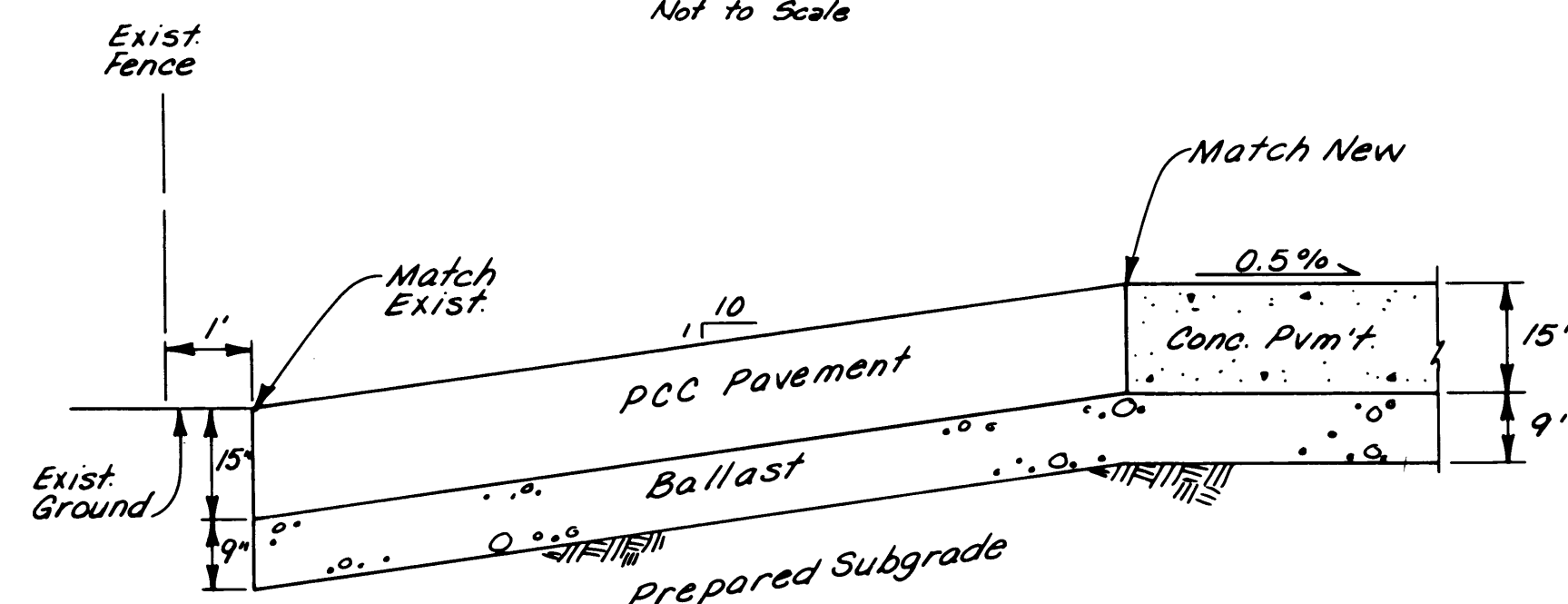
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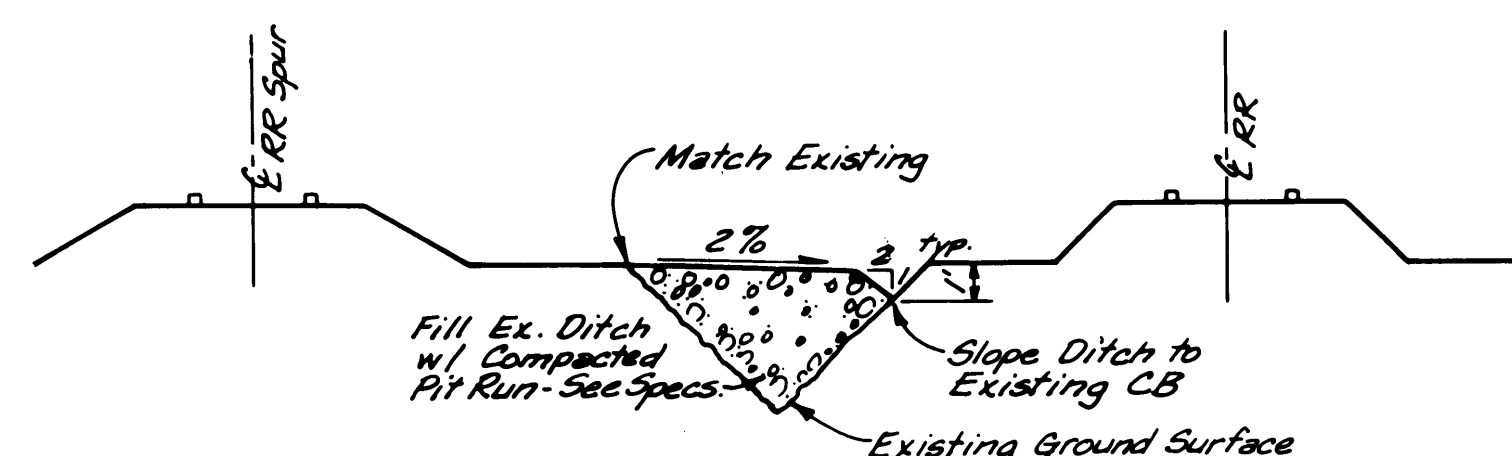
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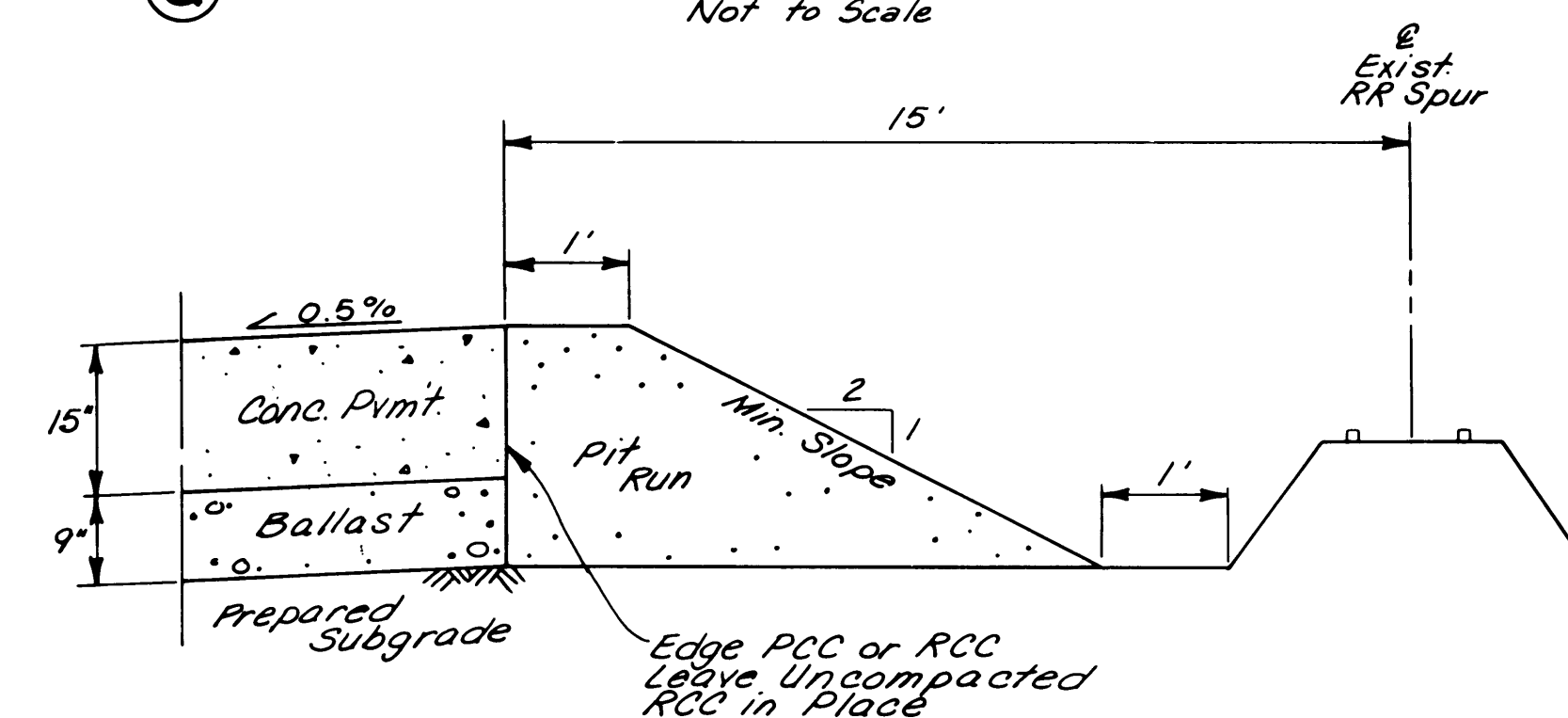
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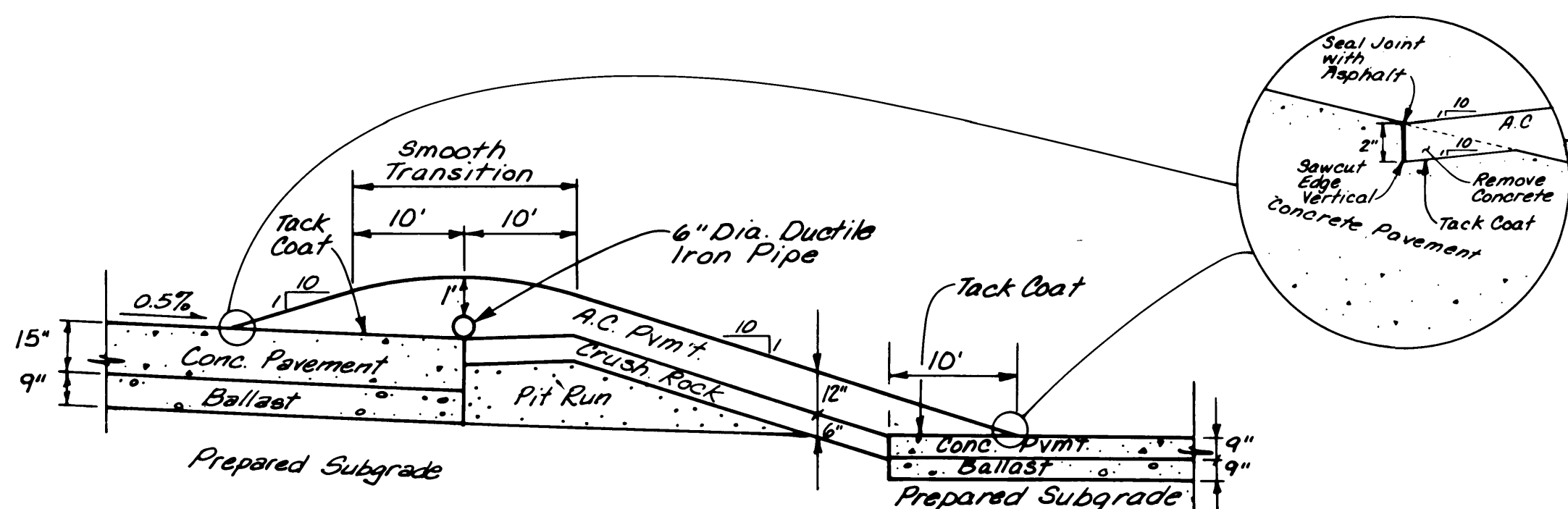
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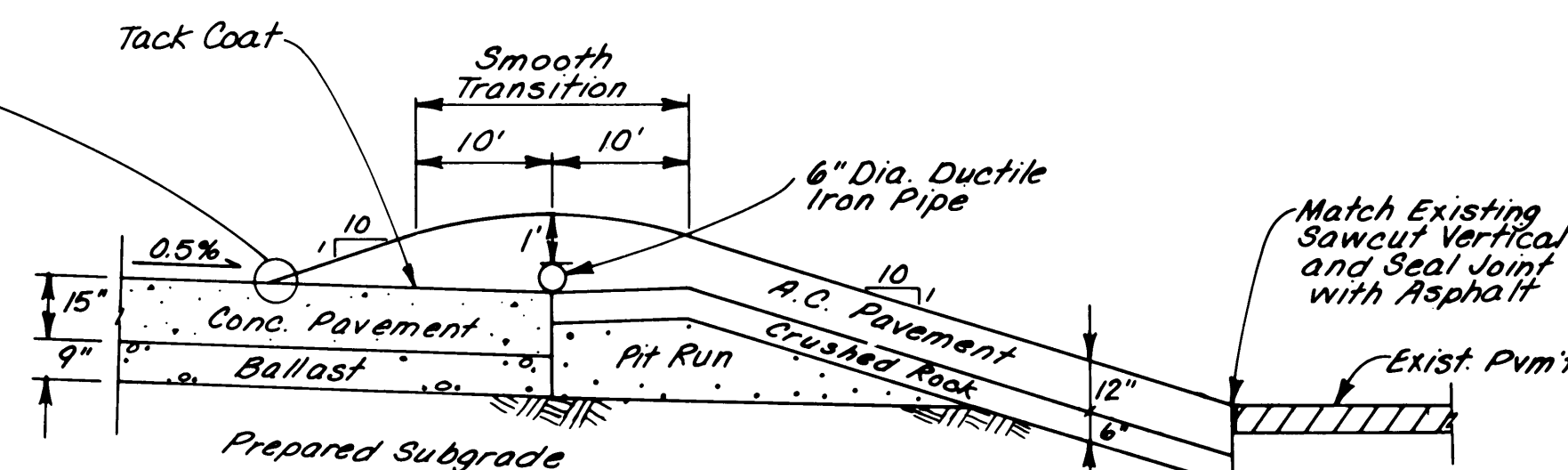
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T TYPICAL RAILROAD SPUR EDGE DETAIL
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U EAST LOG YARD ENTRANCE RAMP
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V WEST LOG YARD ENTRANCE RAMP
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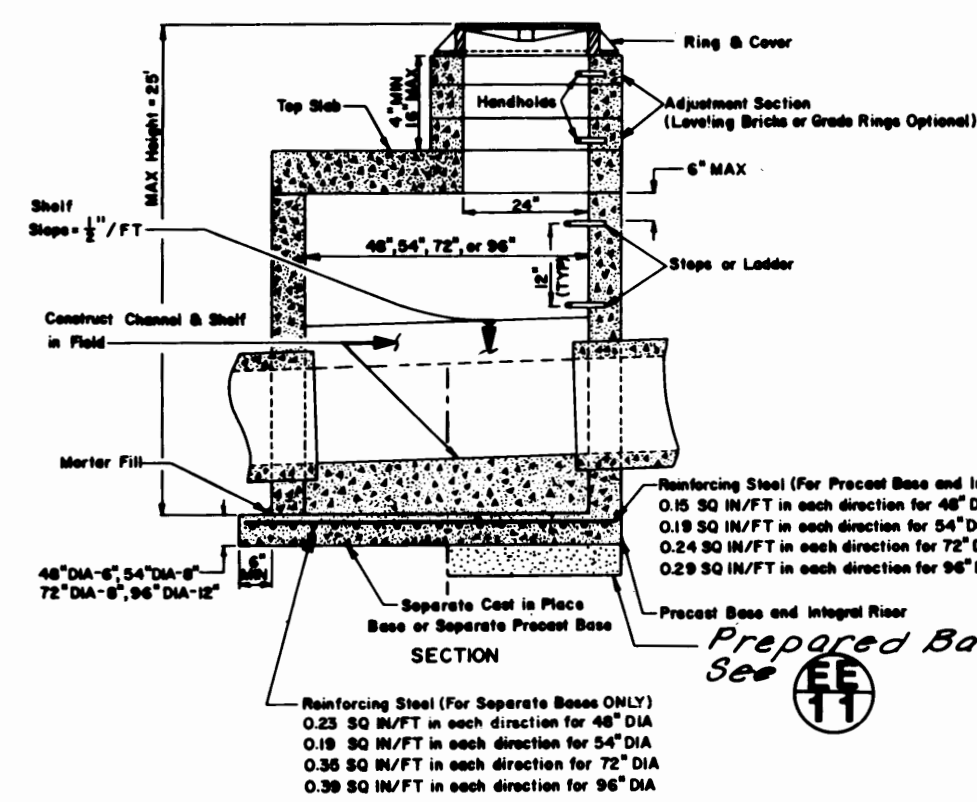
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**PORTAC LOG SORT YARD
PAVING PROJECT - 1988**
PAVING DETAILS

DRAWING No. **EP-4270-20**
CONTRACT No. **646**
SHEET No. **10** OF **20**



NOTES

Manholes to be constructed in accordance with AASHTO M-99 unless otherwise shown on plans or noted in the Standard Specifications.

Handholds in adjustment section shall have 3" minimum clearance. Steps in manhole shall have 6" minimum clearance. See Standard Plan "Miscellaneous Manhole Details".

All reinforced cast in place concrete shall be Class A. Non-reinforced concrete in channel and shelf shall be Class C. All precast concrete shall be Class A.

Precast bases shall be furnished with cutouts or knockouts. Knockouts shall have a wall thickness of 2" minimum.

Knockout or cutout hole size is equal to pipe outer diameter plus manhole wall thickness. Maximum hole size is 36" for 48" manhole, 42" for 54" manhole. Minimum distance between holes is 8".

Manhole rings and covers shall be in accordance with WSDOT Standard Specifications and meet the strength requirements of Federal Specification RR-F-420. Moring surfaces shall be finished to assure non-slipping fit with any cover position.

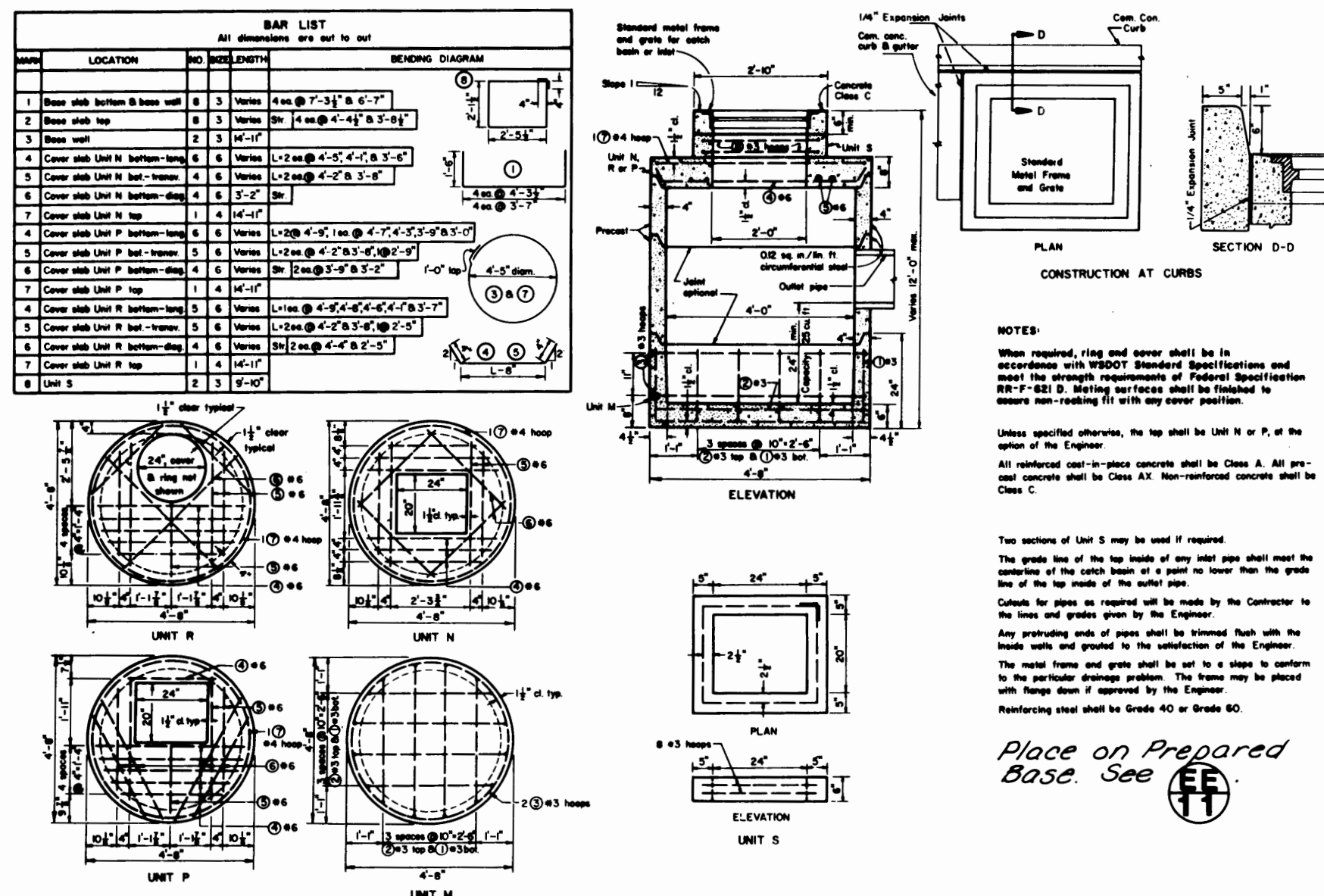
All base reinforcing steel shall have a minimum yield strength of 60,000 PSI and be placed in the upper half of the base with 1" minimum clearance.

For heights of 12" or less, minimum soil bearing value equals 3,300 pounds per square foot. For heights over 12", minimum soil bearing value equals 3,800 pounds per square foot.

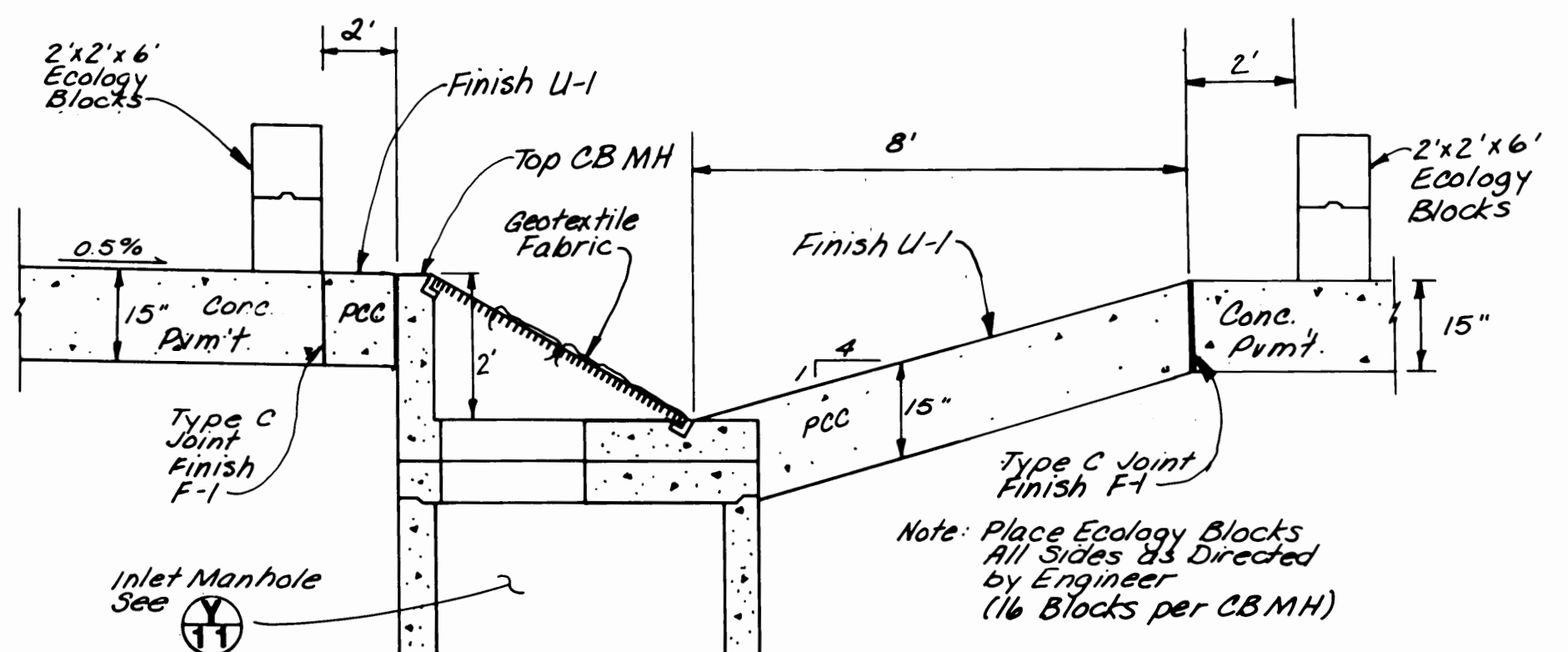
For details showing Grade Ring, Loader, Steps, Handholds and Top Slabs, see Standard Plan "Miscellaneous Manhole Details".

See the Standard Specifications for joint requirements.

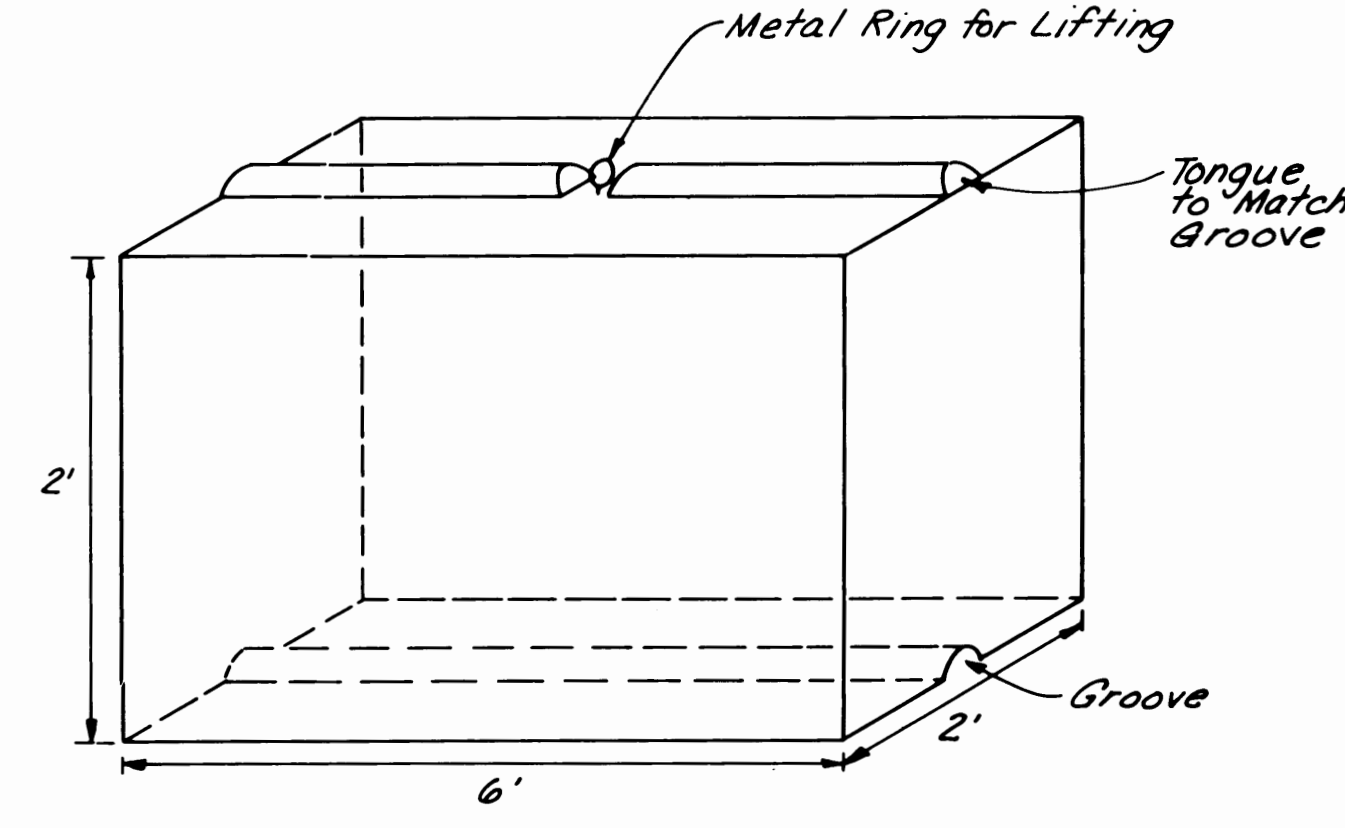
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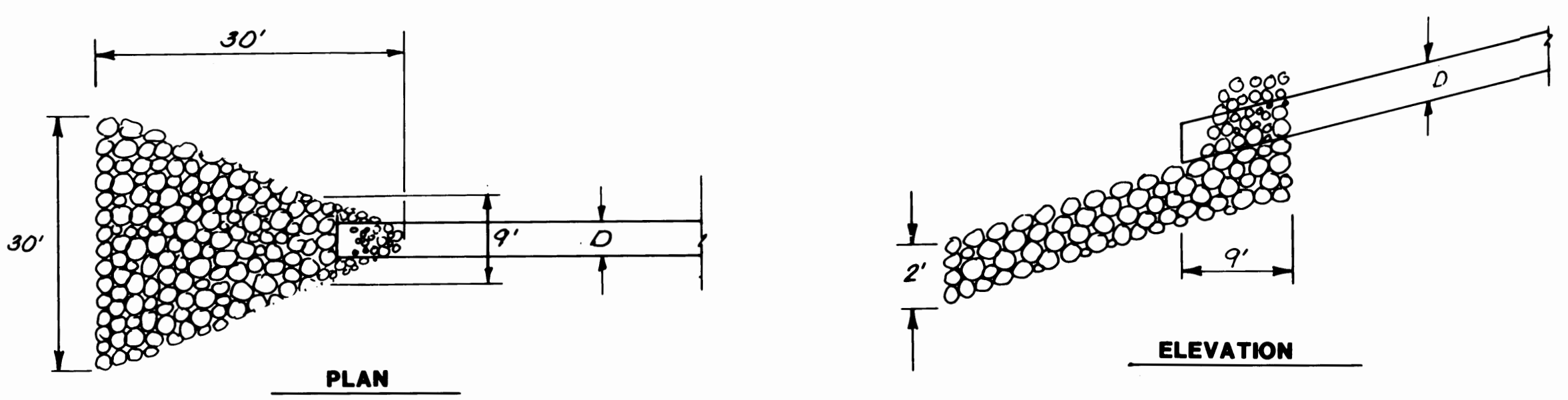
X TYPE 2 CATCH BASIN WSDOT STD. B-1b
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Z TYPE 3 MANHOLE WITH INLET AND TRAFFIC BARRIER
Not to Scale

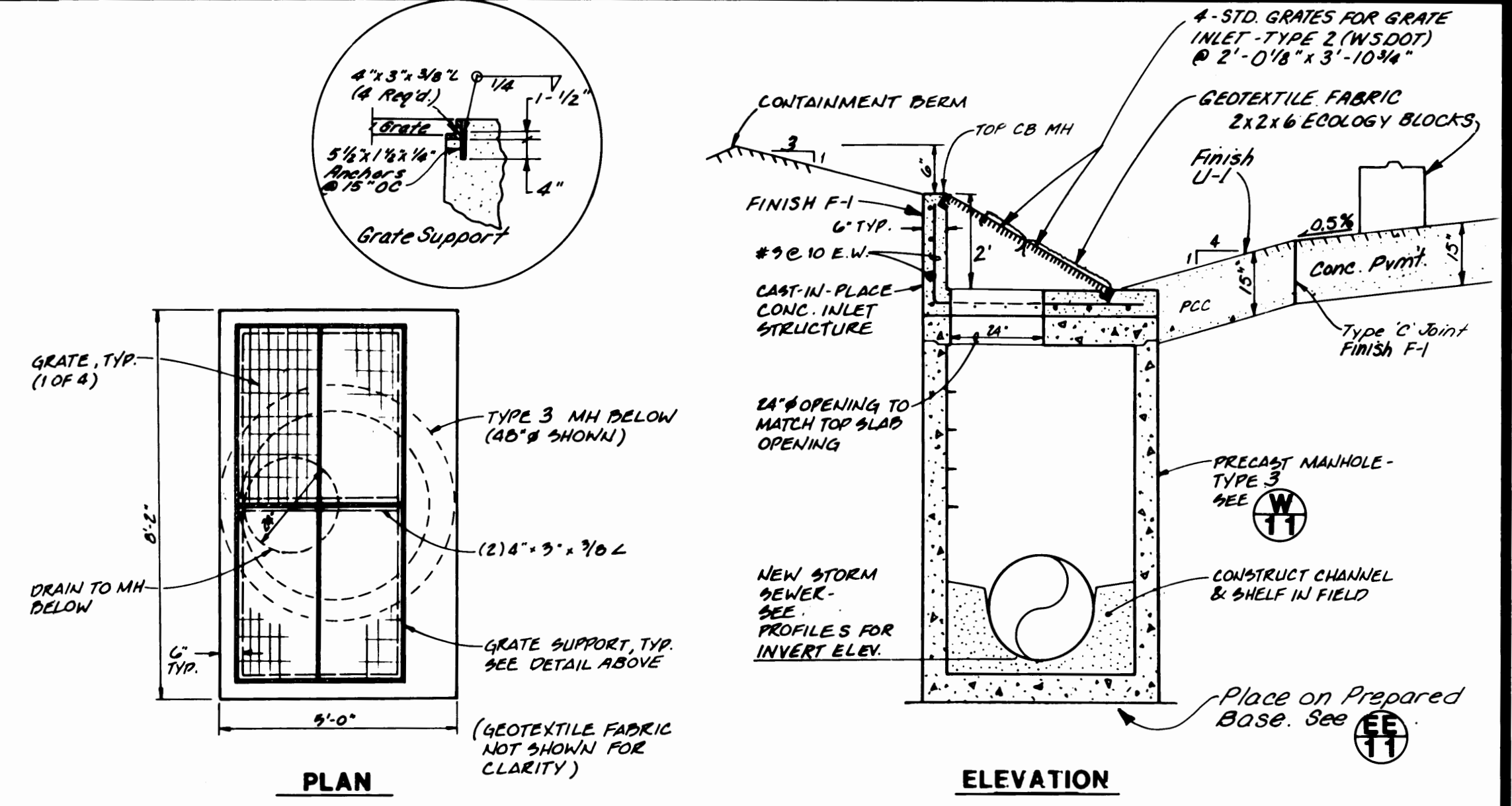


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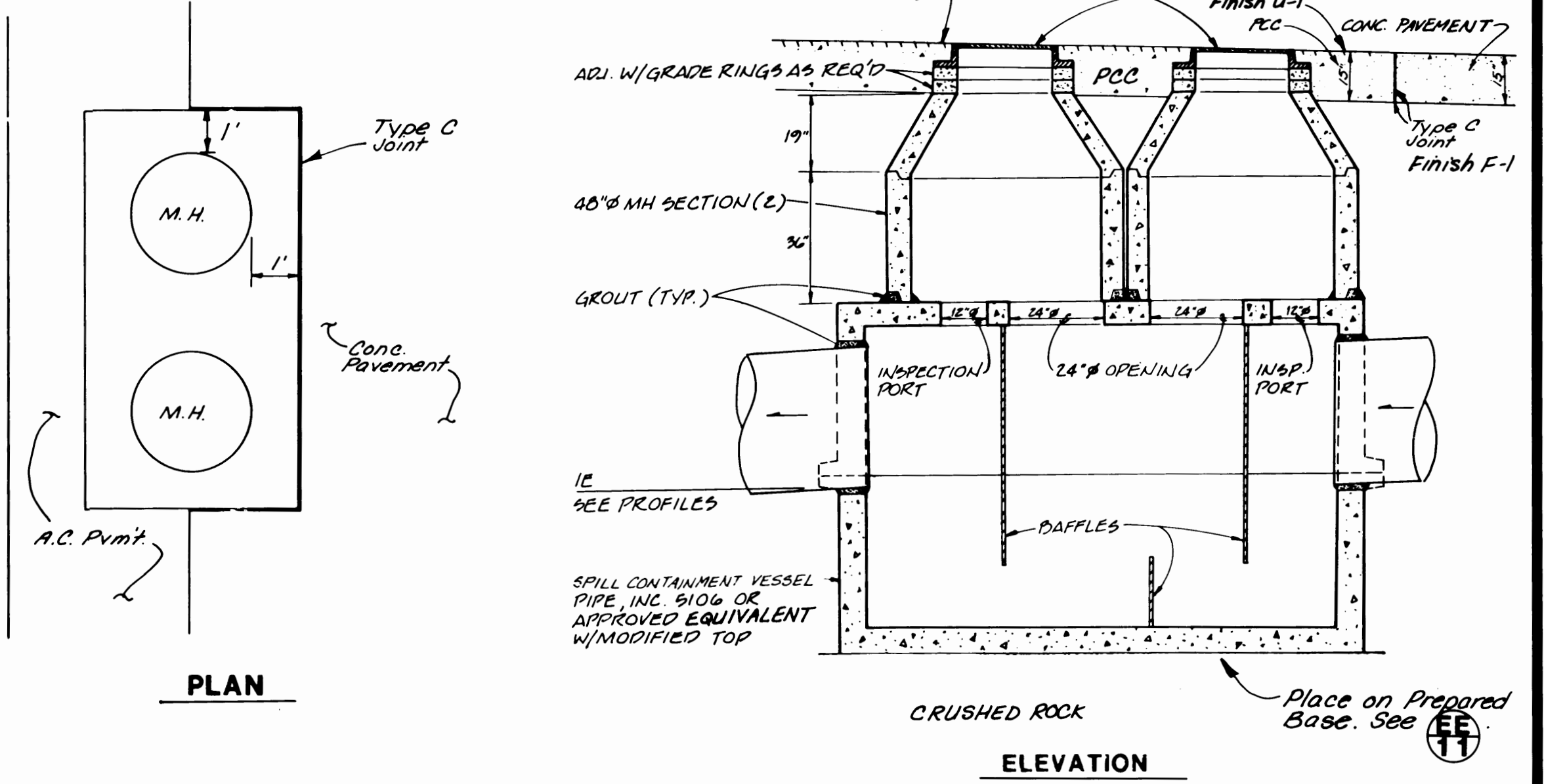


AA TYPE 16 CATCH BASIN
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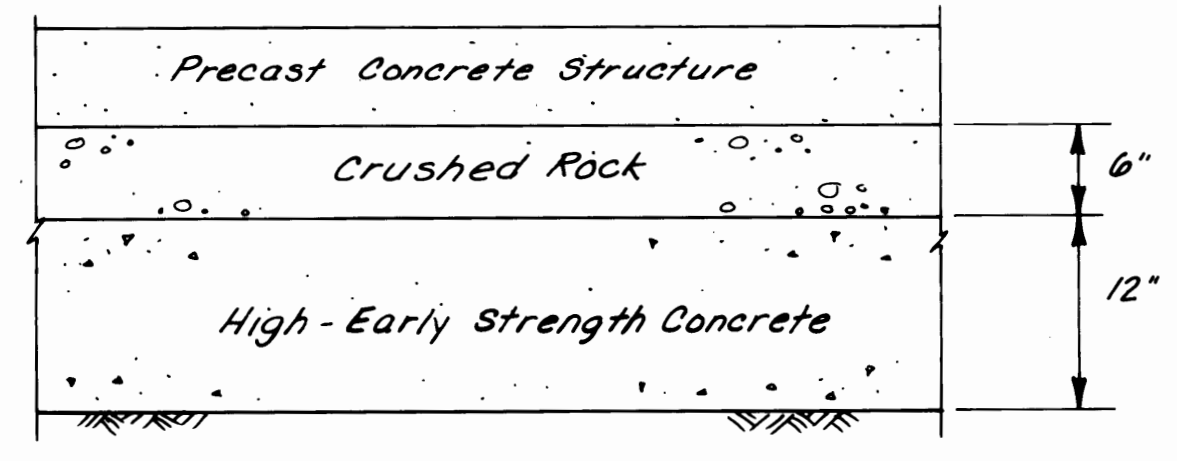
DD RIP RAP
Not to Scale



Y TYPE 3 MANHOLE WITH INLET STRUCTURE
Not to Scale



BB SPILL CONTAINMENT VESSEL
Not to Scale



EE MANHOLE OR CATCH BASIN BASE DETAIL
Not to Scale



PORT OF TACOMA
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206.324.9530



APPROVED
Robert L. MacLeod, P.E.
Chief Engineer
Curtis Ratcliffe, P.E.
Project Manager

DATE 8/10/88
DATE 8-10-88

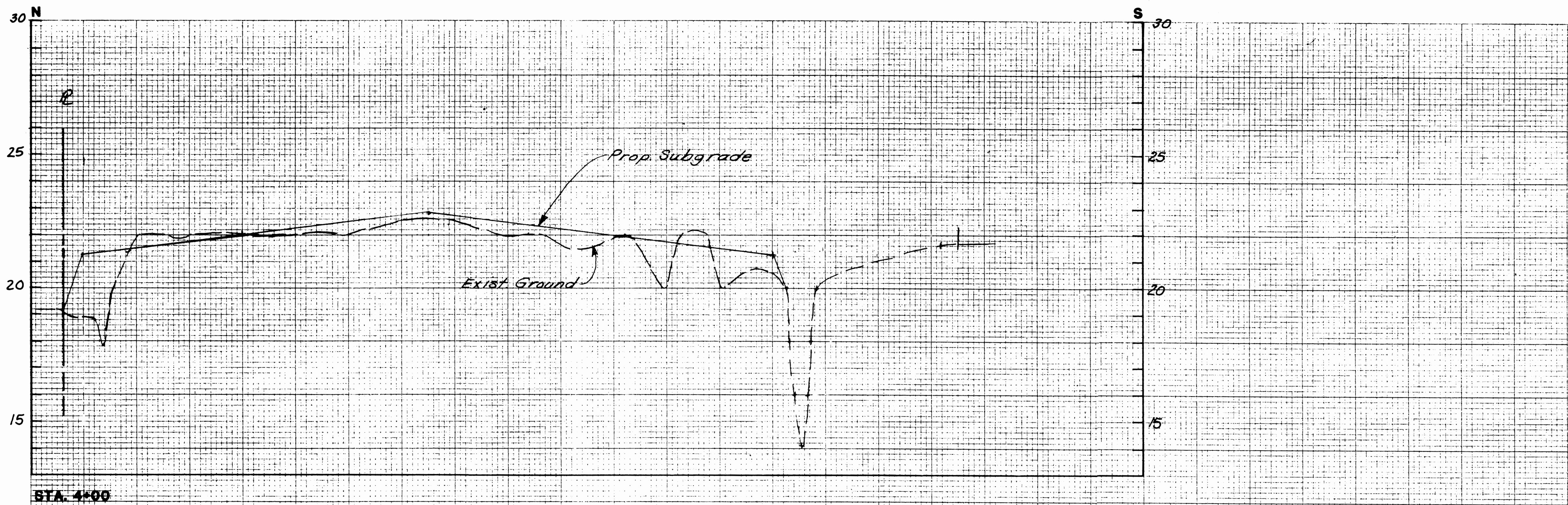
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DATE 7/24/88

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DATE 7/24/88

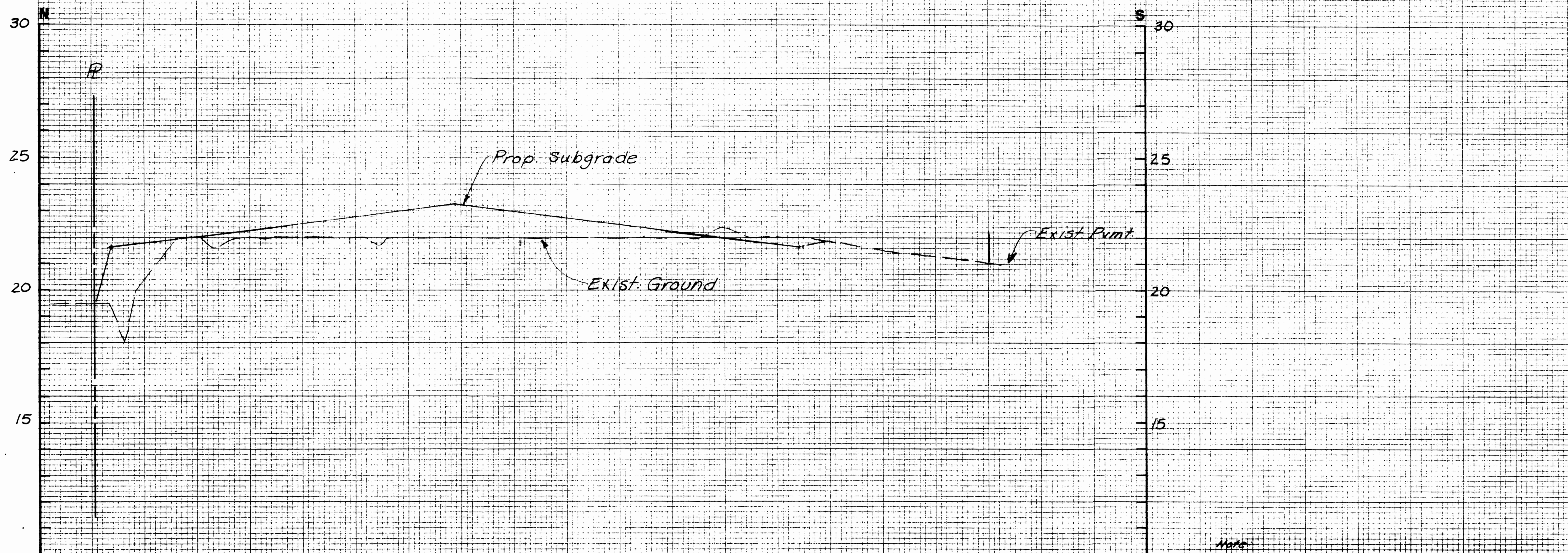
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DATE 7/24/88

PORTAC LOG SORT YARD PAVING PROJECT - 1988
DRAINAGE DETAILS

DRAWING No. EP-4270-20
CONTRACT No. 646
SHEET No. 11 OF 20



STA. 4+00



STA. 3+15

- Notes:
- Existing ground elevation based on 1987 survey. Additional bank may have accumulated.
 - Datum is MLLW.

Horizontal Scale in Feet
0 50 100
Vertical Scale in Feet
0 2 4
Vertical Exaggeration x25



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3/10/88
Date
3/10/88
Date

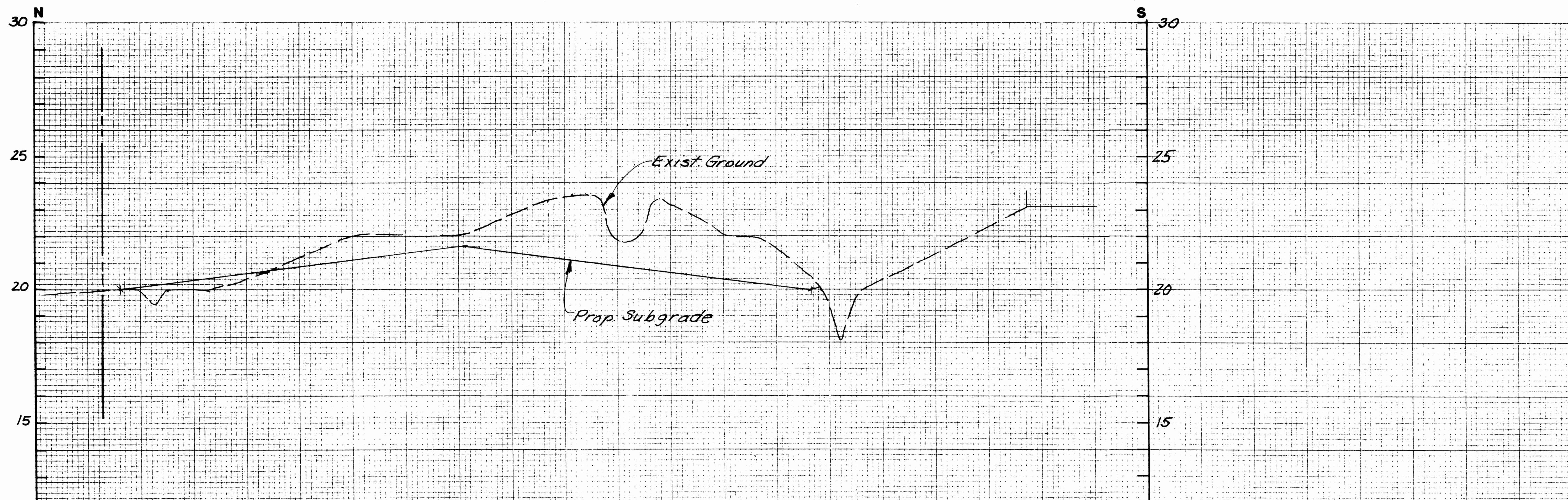
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DRAWN BY
DATE
7/22/88

HFC
CHECKED BY
DATE
7/24/88

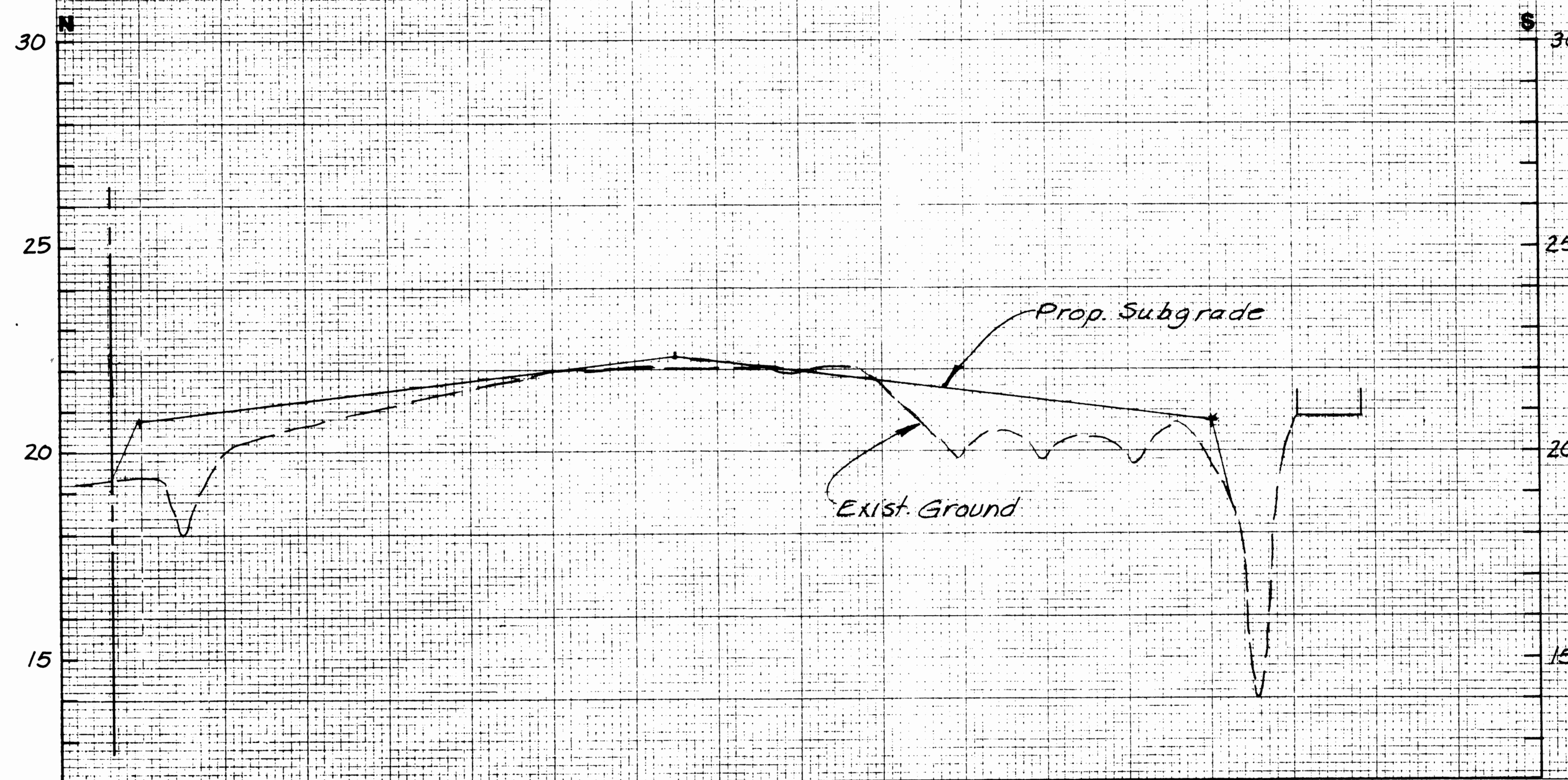
MARK	REVISION	BY	APP.	DATE

**PORTAC LOG SORT YARD
PAVING PROJECT - 1988**
EARTHWORK CROSS SECTIONS
STA. 3+15 & 4+00

DRAWING No. **EP-4270-20**
CONTRACT No. **646**
SHEET No. **12** OF **20**



STA. 6+50



STA. 5+00

Notes:

- Existing ground elevation based on 1987 survey. Additional bark may have accumulated.
- Datum is MLLW.

Horizontal Scale in Feet
0 50 100
Vertical Scale in Feet
0 2 4
Vertical Exaggeration x.25



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Curtis Ratchette
Curtis Ratchette, P.E.
Project Manager

3/10/88
Date
3.10.88
DATE

JCR
DRAWN BY
DATE
7/22/88

HFC
CHECKED BY
DATE
7/24/88

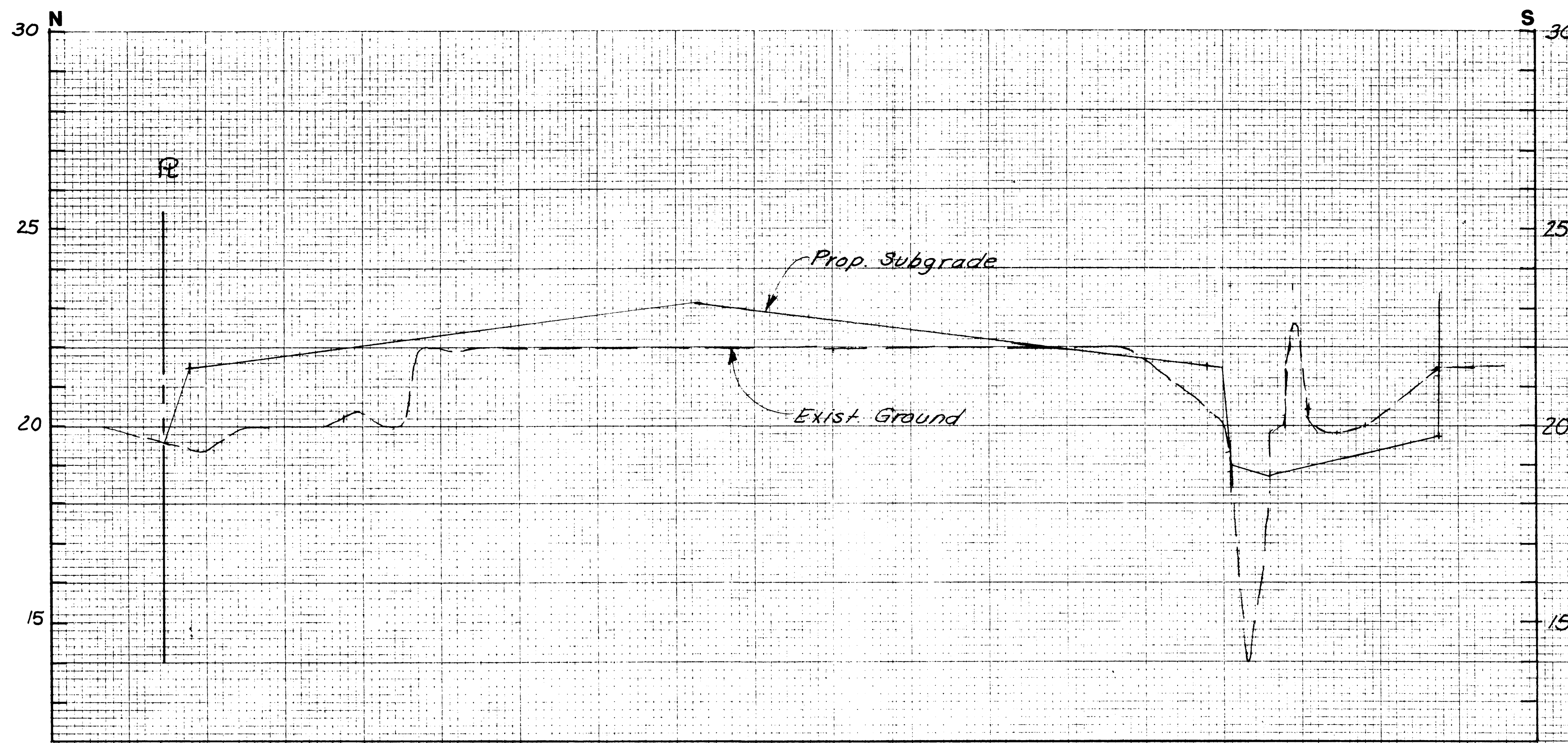
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PROJ. ENGR. DATE

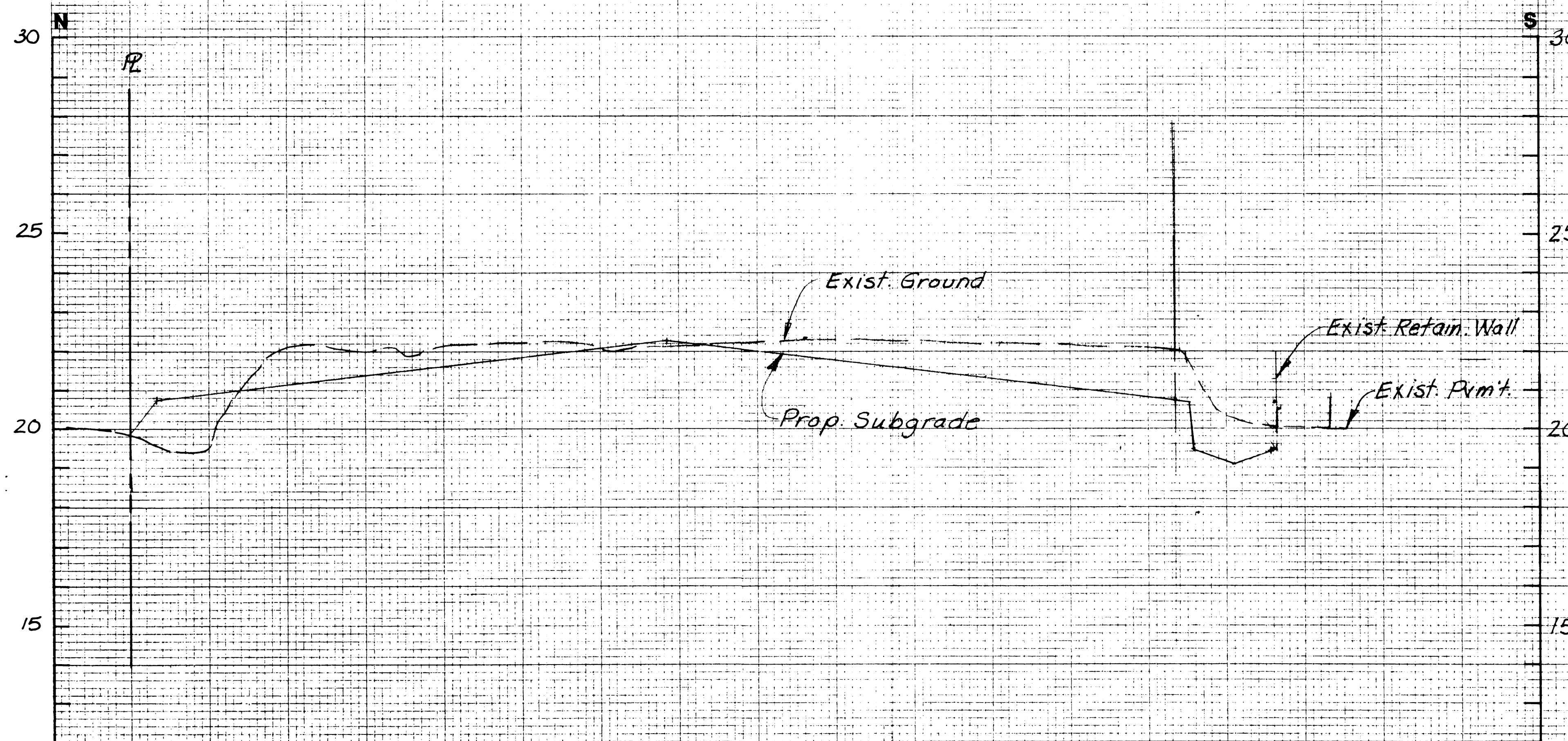
MARK REVISION
BY APP. DATE

**PORTAC LOG SORT YARD
PAVING PROJECT - 1988**
EARTHWORK CROSS SECTIONS
STA. 5+00 & 6+50

DRAWING No. **EP-4270-20**
CONTRACT No. **646**
SHEET No. **13** OF **20**



STA. 8+50



STA. 7+50

Notes:

- Existing ground elevation based on 1987 survey. Additional bank may have accumulated.
- Datum is MLLW.

Horizontal Scale in feet
0 50 100
Vertical Scale in feet
0 25
Vertical Exaggeration x 25



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Curtis Hatchell
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3/10/88
Date
6-10-88
DATE

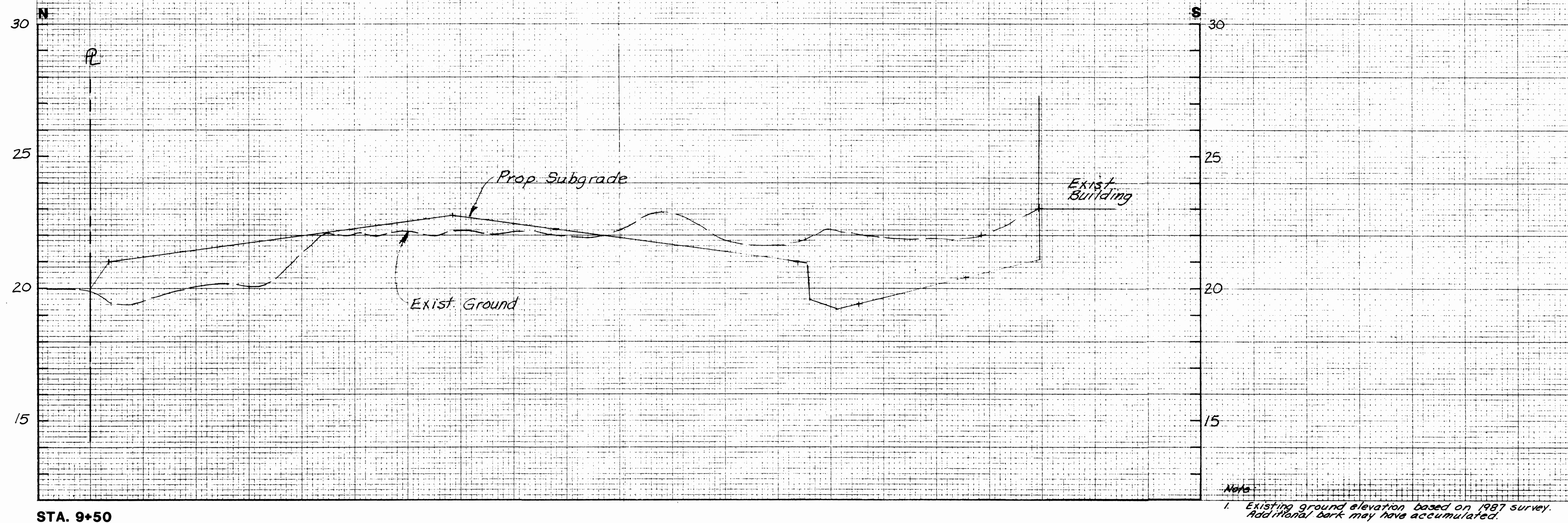
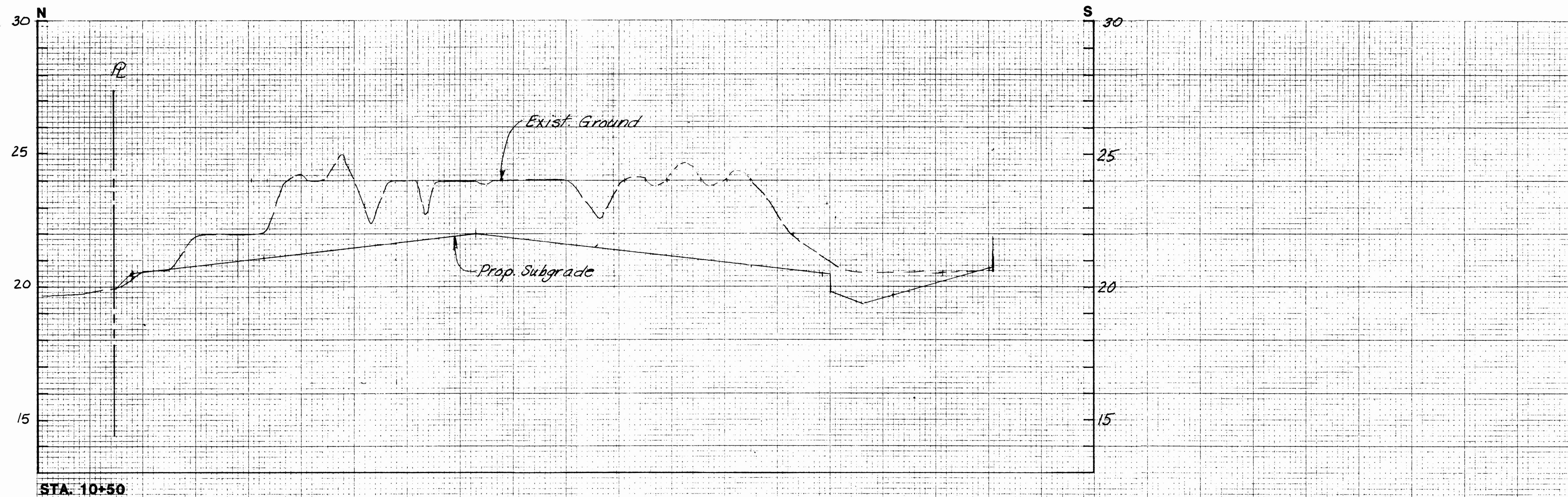
JCR
DRAWN BY
7/22/88
DATE

HFC
CHECKED BY
7/24/88
DATE

AS-BUILT BY	DATE	PROJ. ENGR.	DATE	MARK	REVISION	BY	APP.	DATE

**PORTAC LOG SORT YARD
PAVING PROJECT - 1988**
EARTHWORK CROSS SECTIONS
STA. 7+50 & 8+50

DRAWING No. **EP-4270-20**
CONTRACT No. **646**
SHEET No. **14** OF **20**



Horizontal Scale in Feet
0 50 100
Vertical Scale in Feet
0 2 4
Vertical Exaggeration x 25

Notes
1. Existing ground elevation based on 1987 survey. Additional bark may have accumulated.
2. Datum is MLLW.

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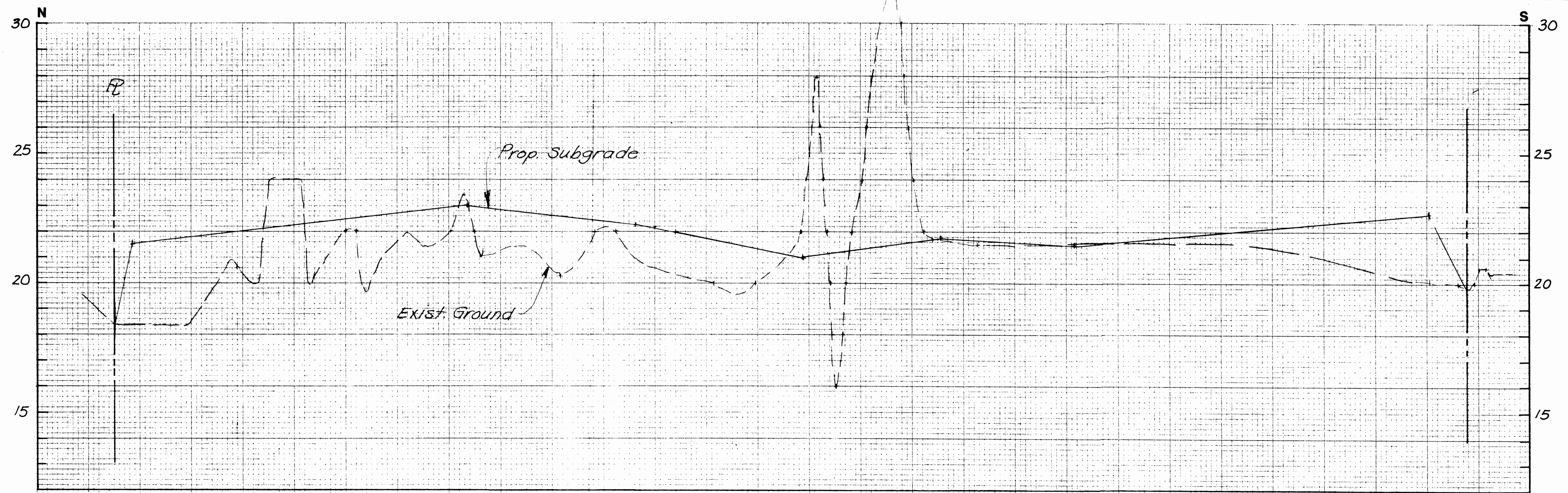
APPROVED
Robert L. MacLeod, P.E.
Chief Engineer
Curtis Hatchette, P.E.
Project Manager
8/10/88
DATE

JCR 7/22/88 HFC 7/24/88
DRAWN BY DATE CHECKED BY DATE
AS-BUILT BY DATE PROJ. ENGR. DATE

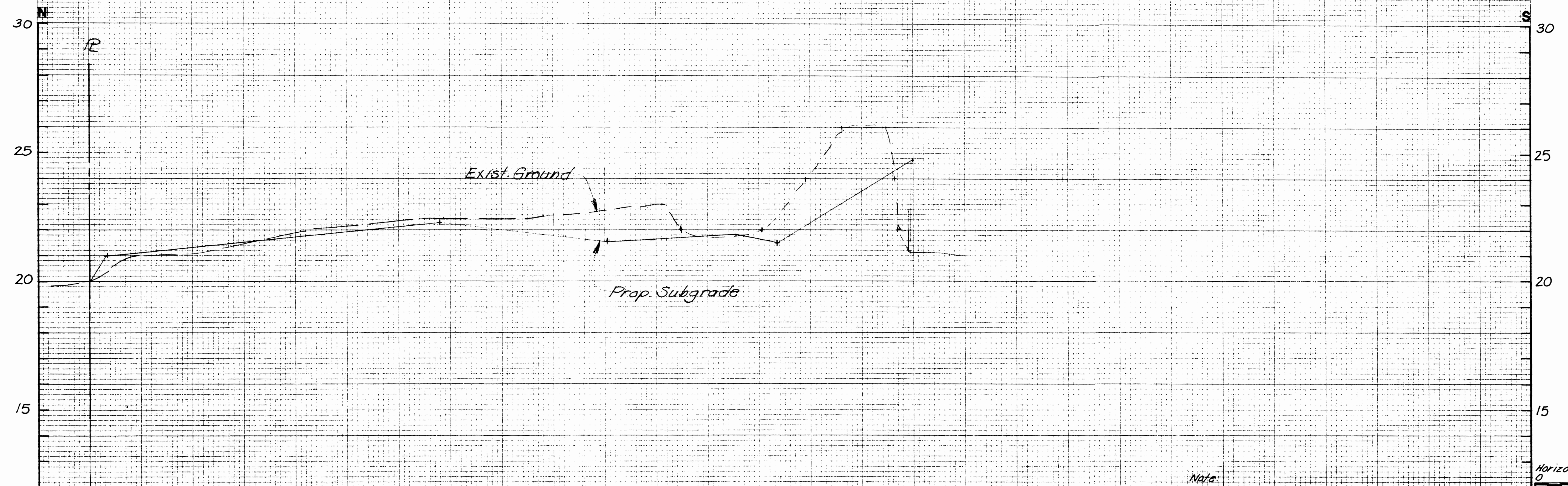
MARK	REVISION	BY	APP.	DATE

**PORTAC LOG SORT YARD
PAVING PROJECT - 1988**
EARTHWORK CROSS SECTIONS
STA. 9+50 & 10+50

DRAWING No. **EP-4270-20**
CONTRACT No. **646**
SHEET No. **15** OF **20**



STA. 12+50



STA. 11+50

Note:
 1. Existing ground elevation based on 1987 survey. Additional bank may have accumulated.
 2. Datum is MLLW.
 Horizontal Scale in Feet
 0 50 100
 Vertical Scale in Feet
 0 25 50
 Vertical Exaggeration x 25



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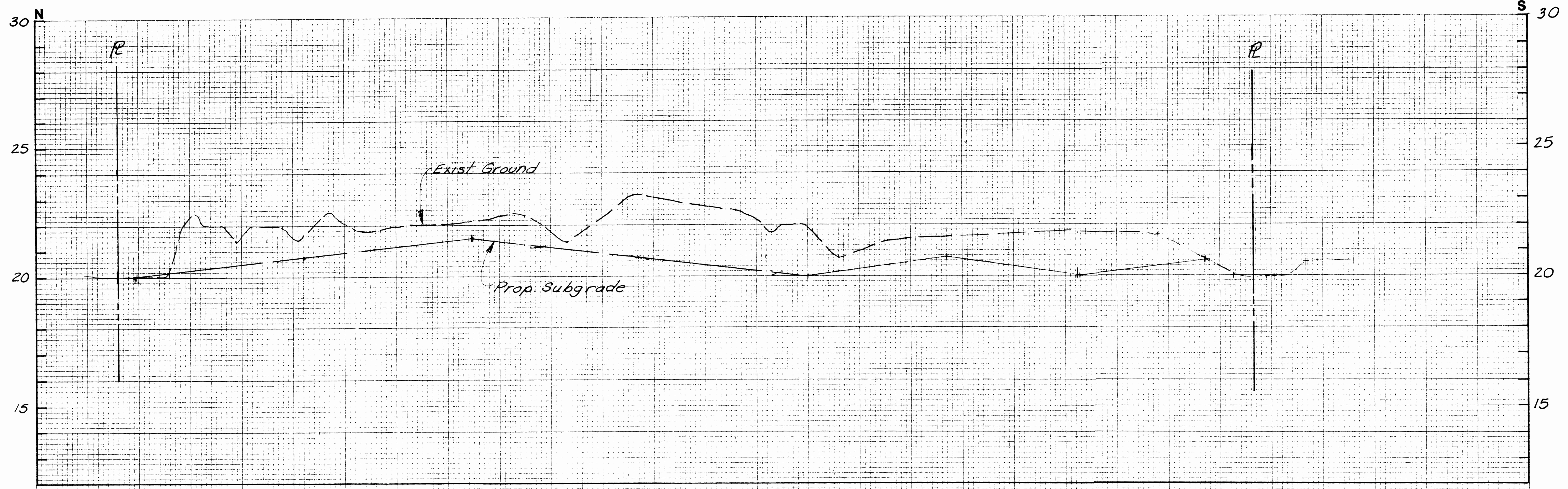
APPROVED
 Robert L. MacLeod, P.E.
 Chief Engineer
 8/10/88
 DATE
 Curtis Ratcliffe, P.E.
 Project Manager

JCR
 DRAWN BY DATE
 7/22/88
 HFC
 CHECKED BY DATE
 7/24/88
 AS-BUILT BY DATE
 PROJ. ENGR. DATE

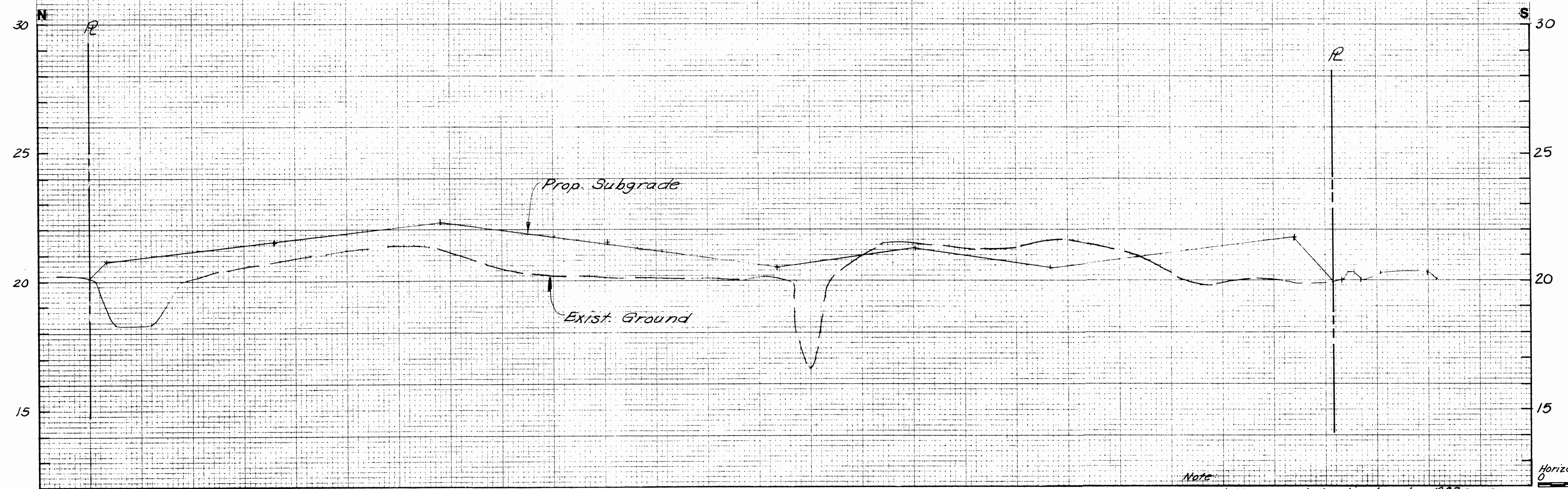
MARK	REVISION	BY	APP.	DATE

**PORTAC LOG SORT YARD
 PAVING PROJECT - 1988**
EARTHWORK CROSS SECTIONS
STA. 11+50 & 12+50

DRAWING No. **EP-4270-20**
 CONTRACT No. **646**
 SHEET No. **16** OF **20**



STA. 14+50



STA. 13+50

Note:
 1. Existing ground elevation based on 1987 survey. Additional work may have accumulated.
 2. Datum is MLLW.

Horizontal Scale in feet
 0 50 100
 Vertical Scale in feet
 0 2 4
 Vertical Exaggeration x25

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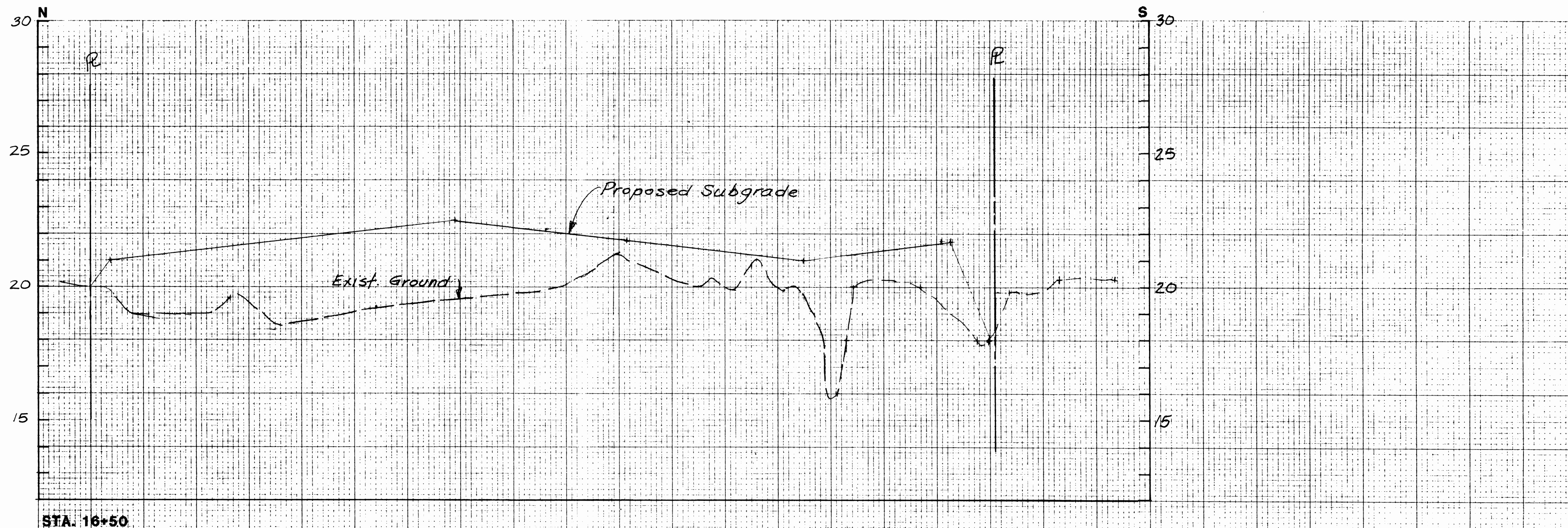
APPROVED
 Robert L. MacLeod, P.E.
 Chief Engineer
 Curtis Ratcliffe, P.E.
 Project Manager

DATE 8/10/88
 JCR DRAWN BY 7/22/88
 HFC CHECKED BY 7/24/88
 AS-BUILT BY DATE PROJ. ENGR. DATE

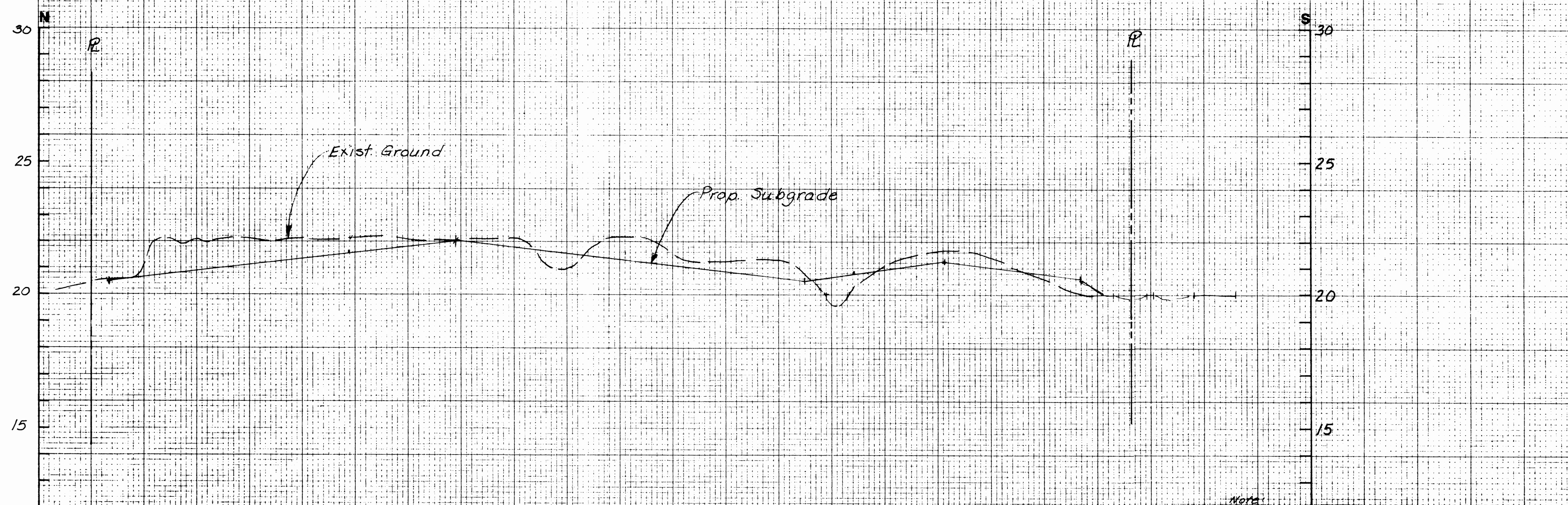
MARK	REVISION	BY	APP.	DATE

**PORTAC LOG SORT YARD
 PAVING PROJECT - 1988**
**EARTHWORK CROSS SECTIONS
 STA. 13+50 & 14+50**

DRAWING No. **EP-4270-20**
 CONTRACT No. **646**
 SHEET No. **17** OF **20**



STA. 16+50



STA. 15+50

Notes:
 1. Existing ground elevation based on 1987 survey. Additional work may have accumulated.
 2. Datum is MLLW.
 Horizontal Scale in Feet
 0 50 100
 Vertical Scale in Feet
 0 2 4
 Vertical Exaggeration x25



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 Curtis R. Rasmussen, P.E.
 Project Manager

3/10/88
 Date
 8-10-88
 DATE

JCR
 DRAWN BY
 DATE
 AS-BUILT BY
 DATE

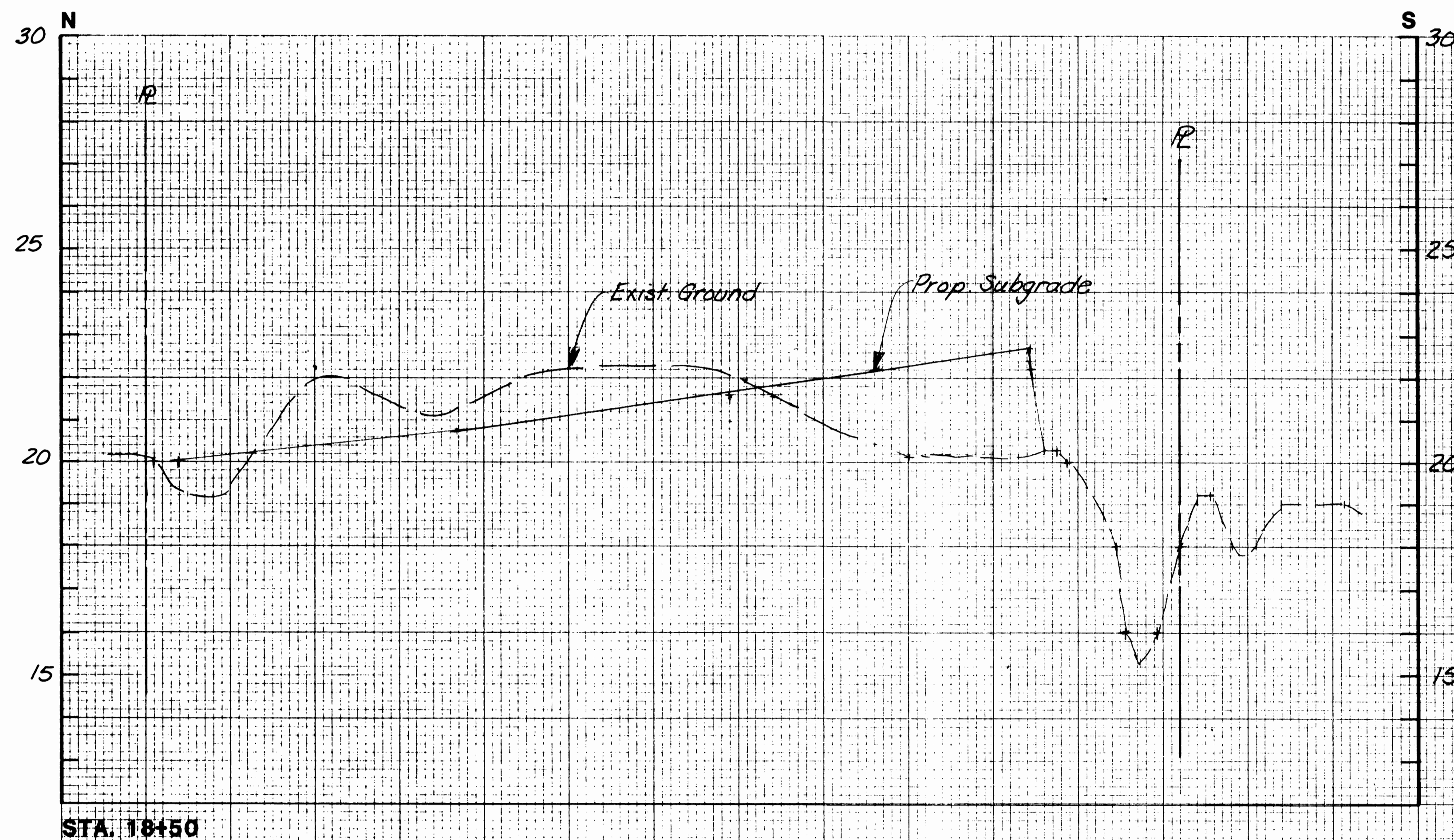
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 PROJ. ENGR. DATE

MARK
 REVISION

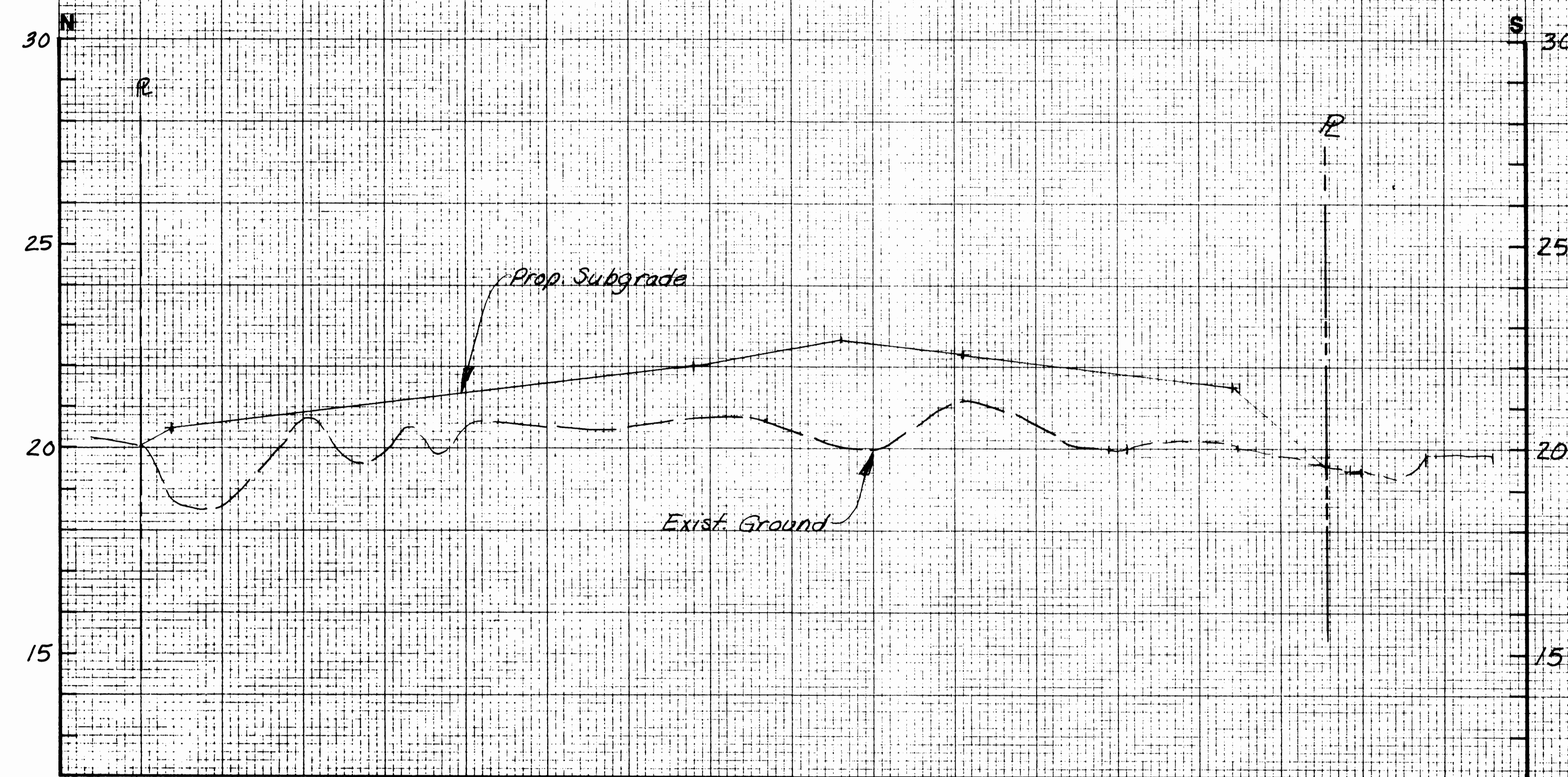
BY
 APP.
 DATE

**PORTAC LOG SORT YARD
 PAVING PROJECT - 1988
 EARTHWORK CROSS SECTIONS
 STA. 15+50 & 16+50**

DRAWING No. **EP-4270-20**
 CONTRACT No. **646**
 SHEET No. **18** OF **20**



STA. 18+50



STA. 17+50

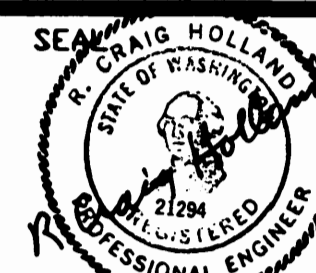
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 2. Datum is MLLW.

Horizontal Scale in Feet
 0 50 100
 Vertical Scale in Feet
 0 2 4
 Vertical Exaggeration x 36



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 Chief Engineer
 Curtis Ratchiff, P.E.
 Project Manager

8/10/88
 Date
 8/10/88
 Date

JCR
 DRAWN BY
 AS-BUILT BY

7/22/88
 DATE
 7/24/88
 CHECKED BY DATE

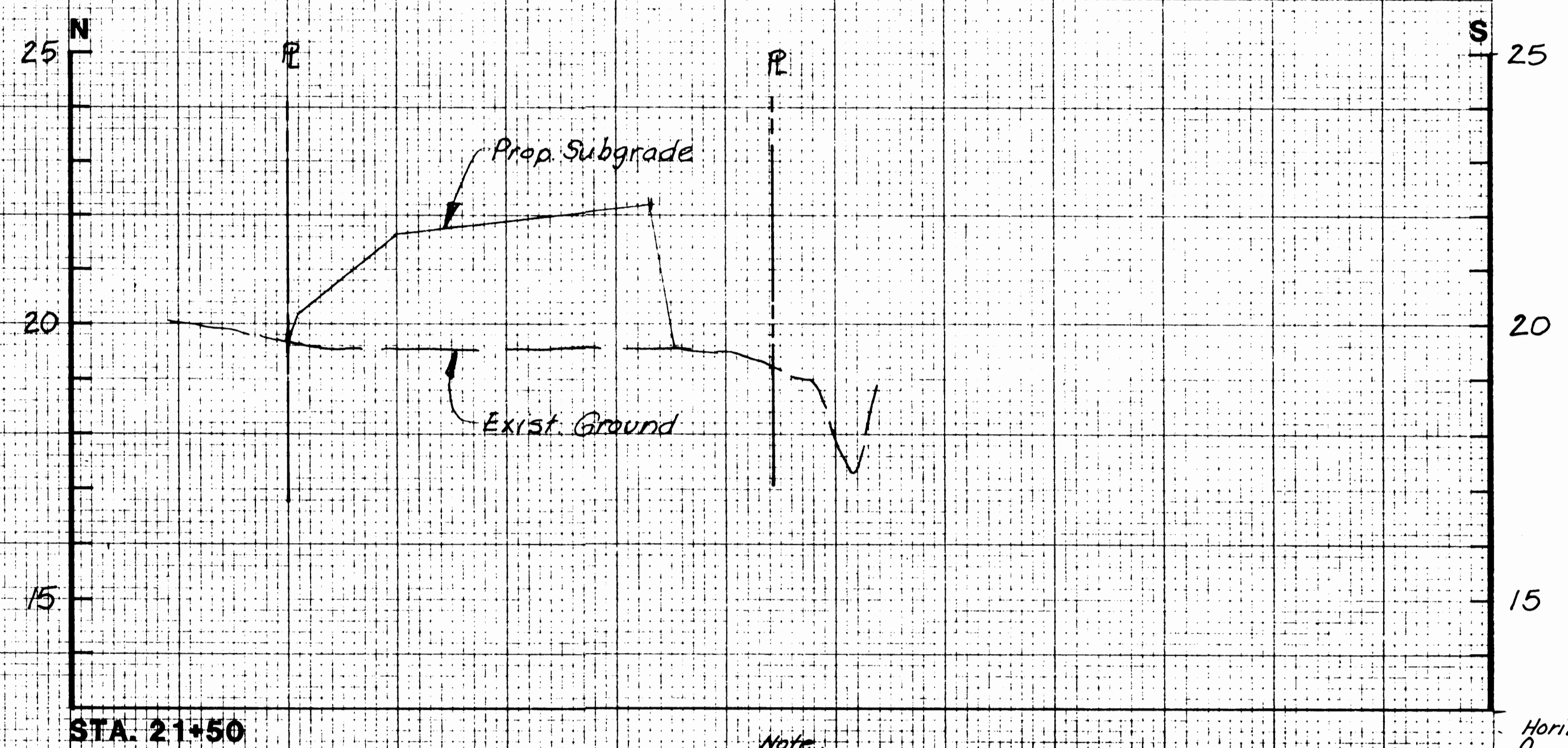
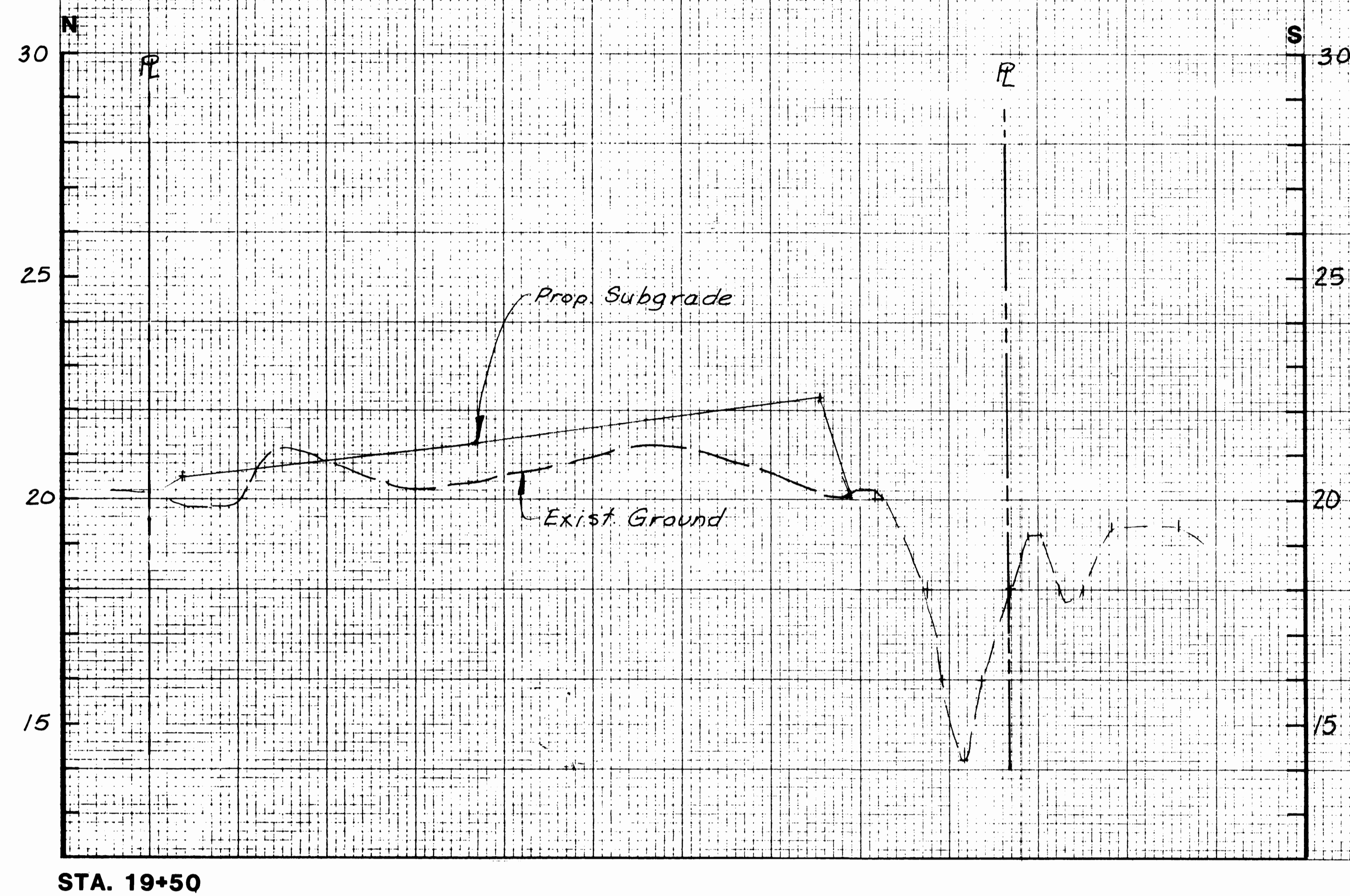
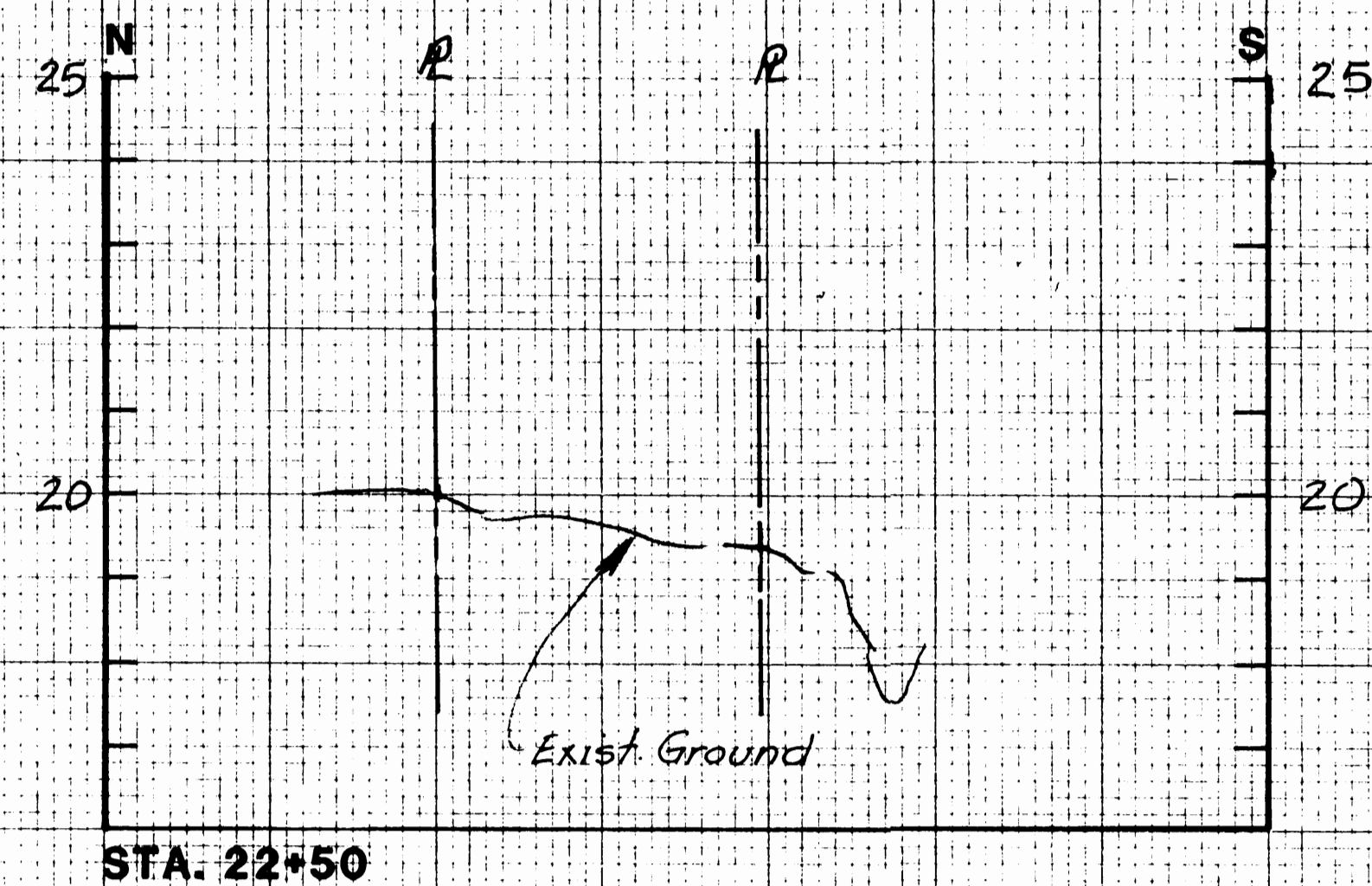
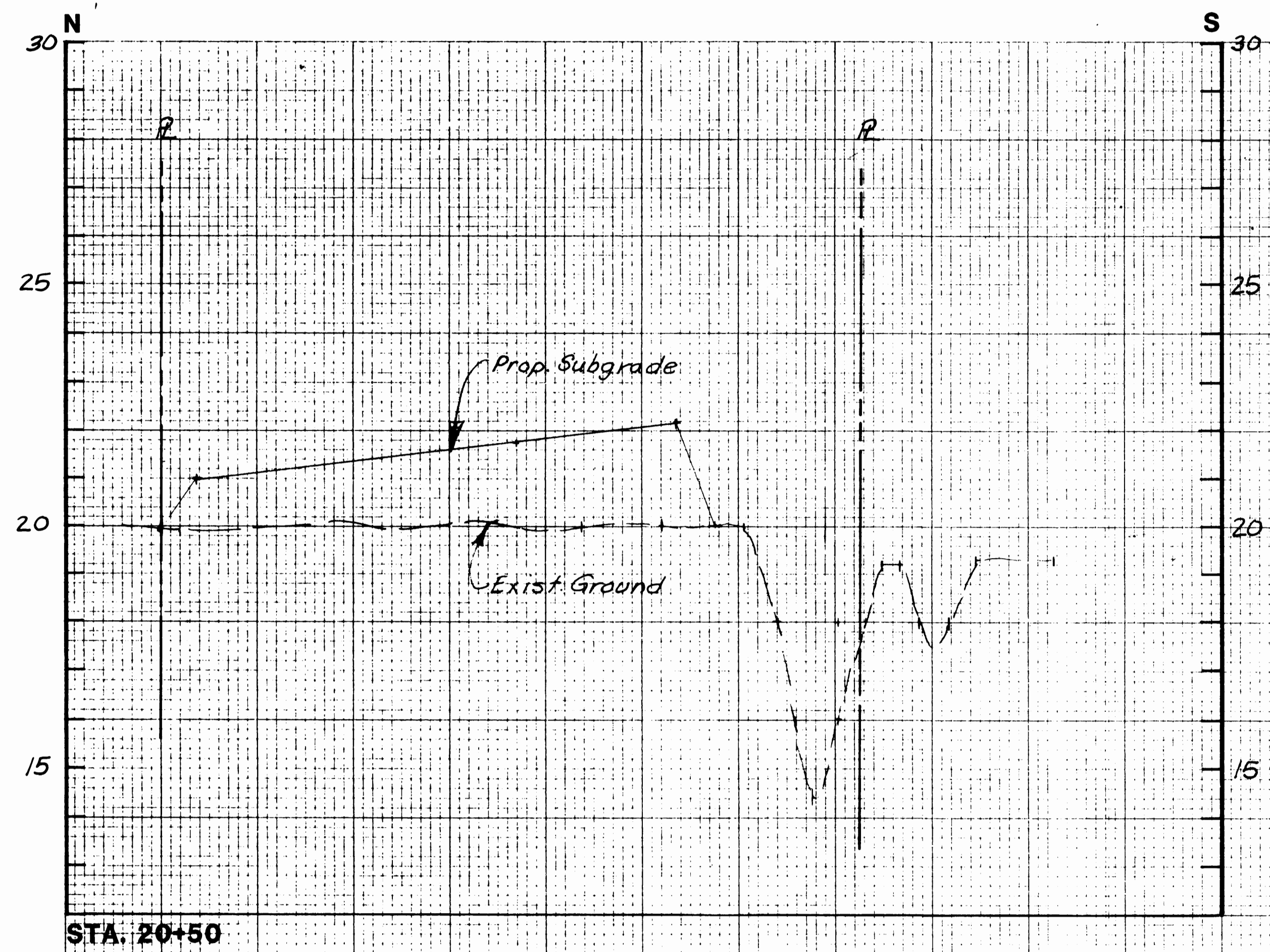
HFC
 PROJENGR. DATE

MARK
 REVISION

BY
 APP.
 DATE

**PORTAC LOG SORT YARD
 PAVING PROJECT - 1988
 EARTHWORK CROSS SECTIONS
 STA. 17+50 & 18+50**

DRAWING No. **EP-4270-20**
 CONTRACT No. **646**
 SHEET No. **19** OF **20**



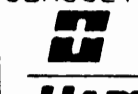
Note:
 1. Existing ground elevation based on 1987 survey. Additional bank may have accumulated.
 2. Datum is MLLW.

Horizontal Scale in Feet
 0 50 100
 Vertical Scale in Feet
 0 2 4
 Vertical Exaggeration x25



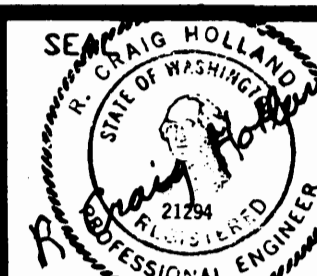
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APPROVED
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 Chief Engineer
 Curtis Ratcliffe, P.E.
 Project Manager

8/10/88
 Date
 8-10-88
 Date

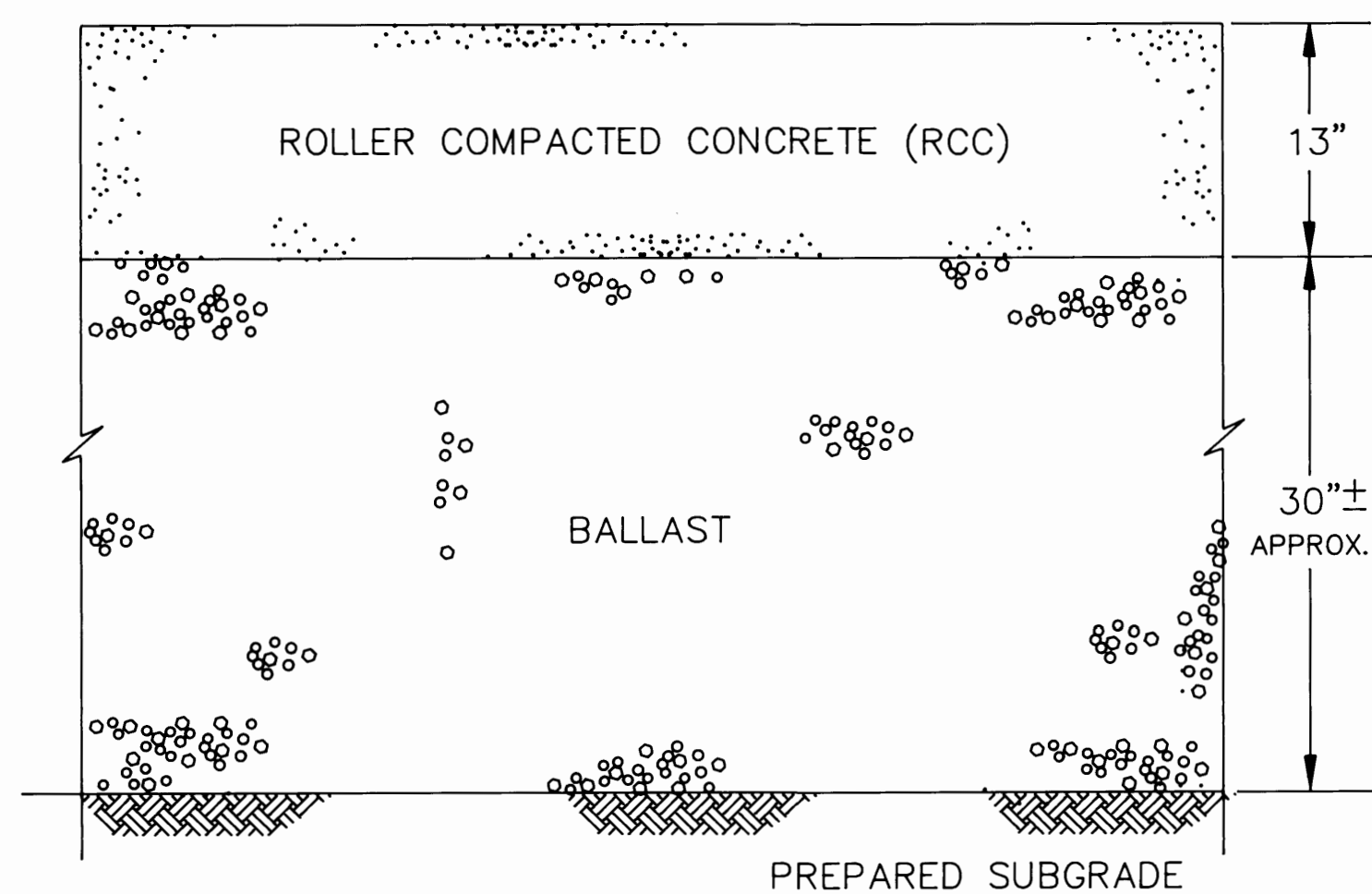
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 7/22/88
 DATE
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 CHECKED BY DATE
 PROJ. ENGR. DATE

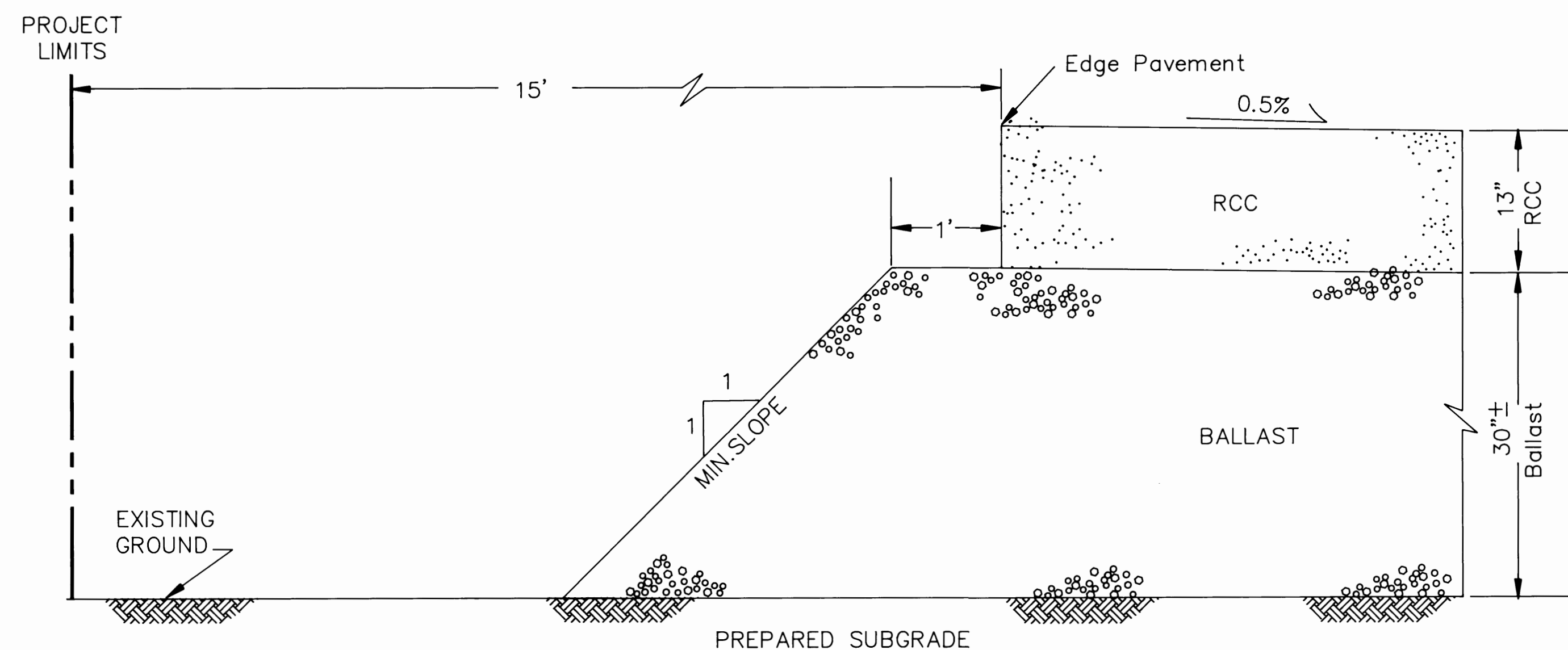
MARK	REVISION	BY	APP.	DATE

**PORTAC LOG SORT YARD
 PAVING PROJECT - 1988
 EARTHWORK CROSS SECTIONS
 STA. 19+50, 20+50, 21+50, & 22+50**

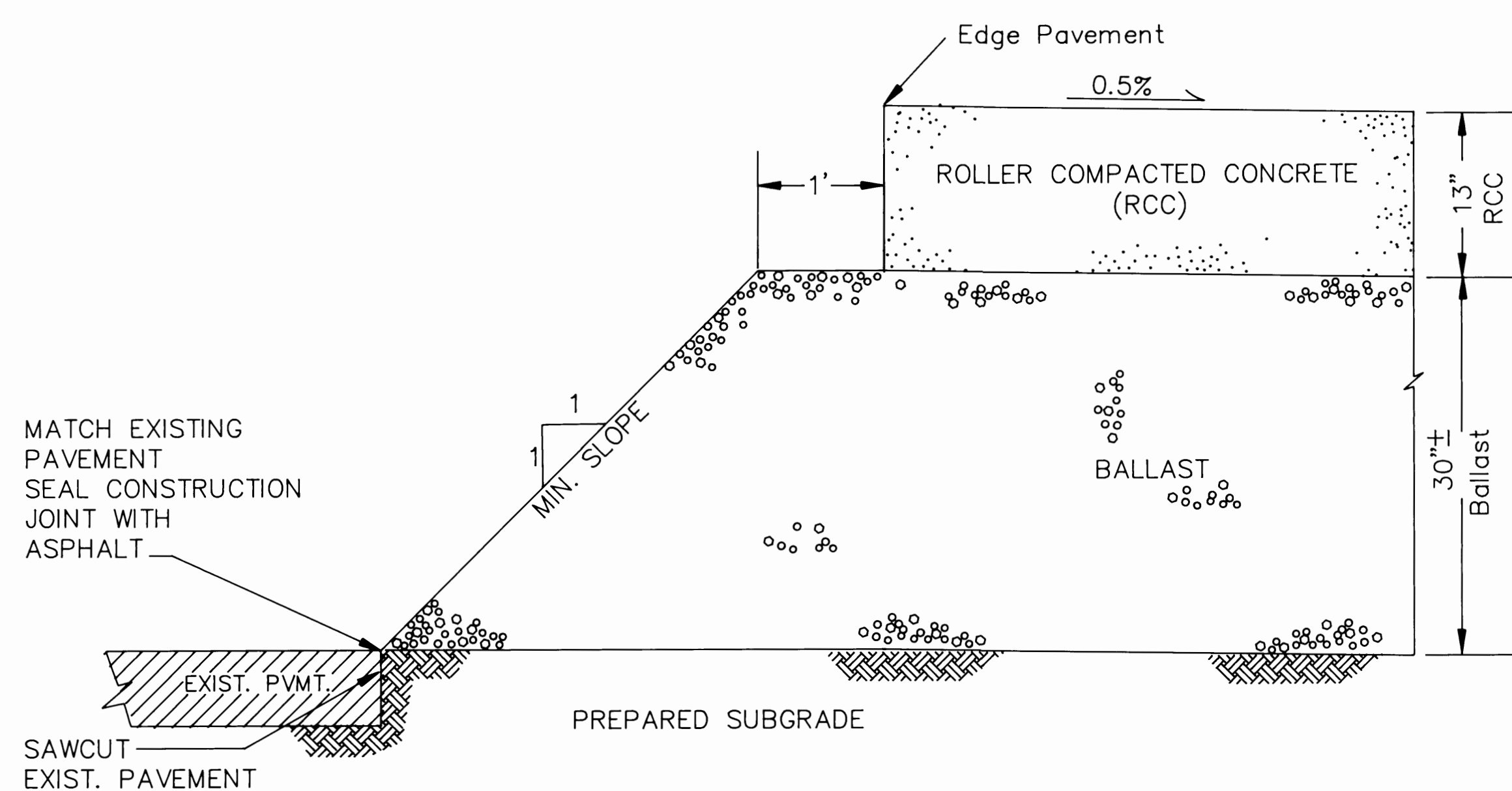
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 CONTRACT No. **646**
 SHEET No. **20** OF **20**



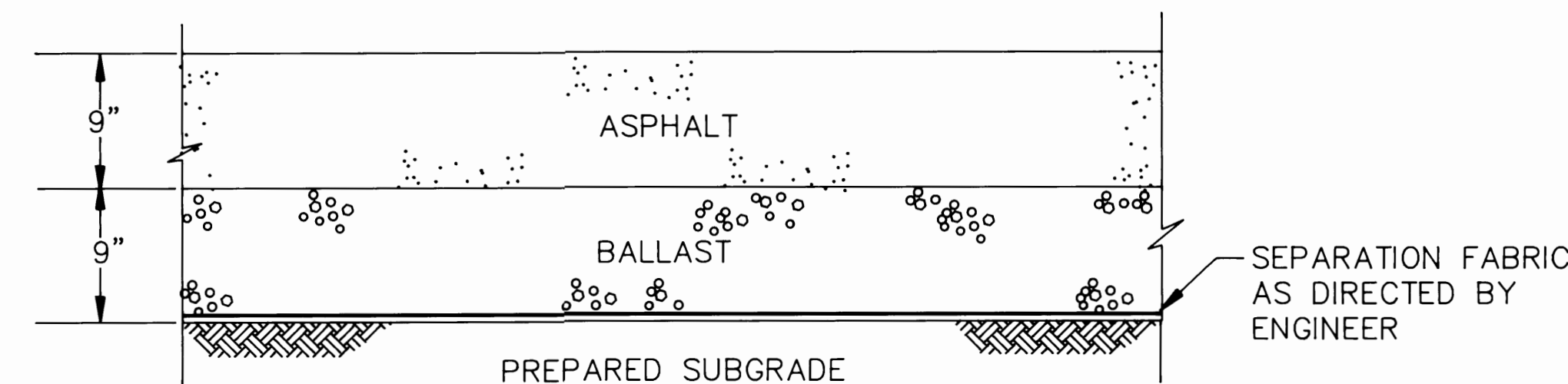
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NOT TO SCALE



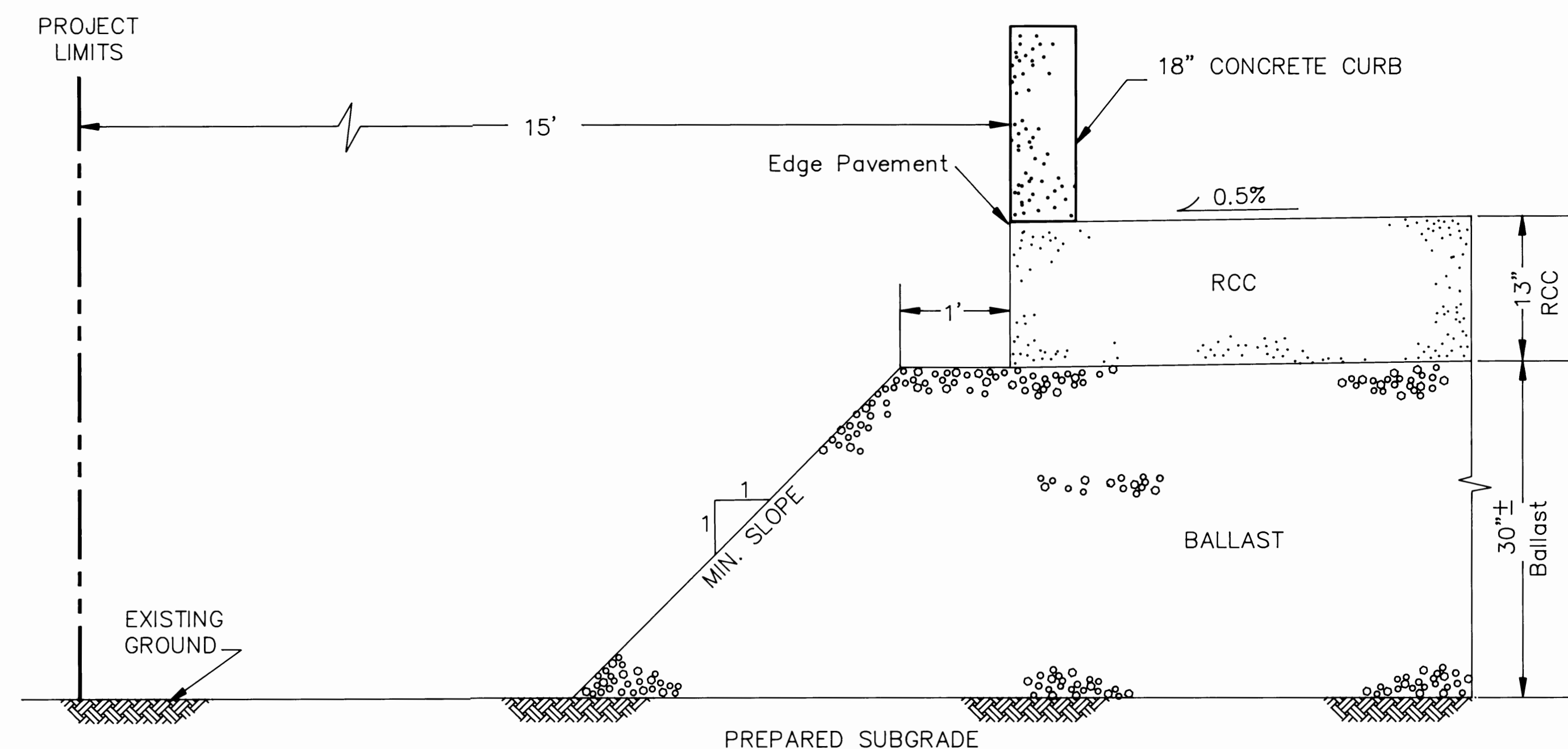
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NOT TO SCALE



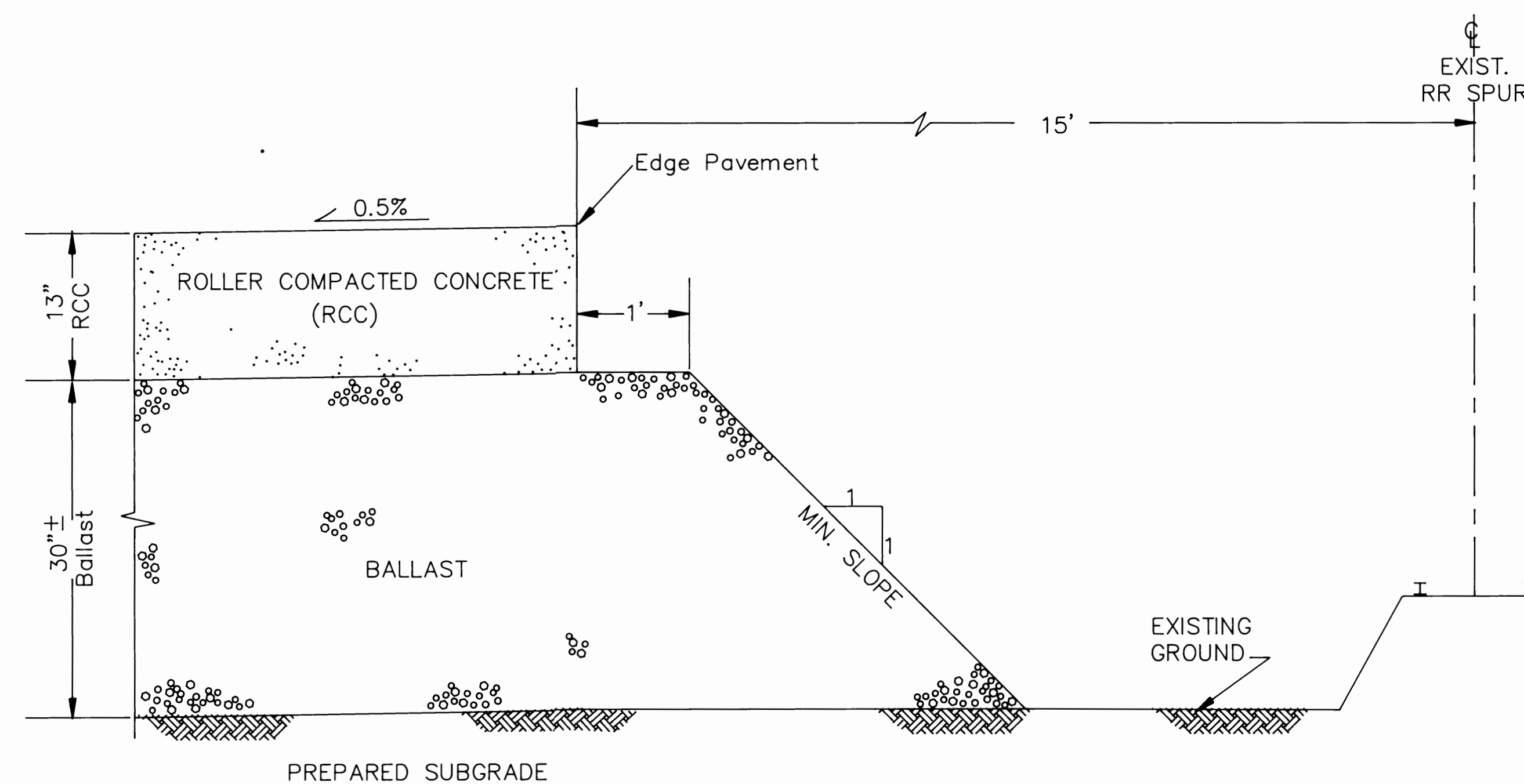
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NOT TO SCALE



B TYPICAL SAW MILL PAVEMENT SECTION (See Dwg. EP-4270-20 / Sh 9 of 20)
NOT TO SCALE



M TYPICAL NORTH EDGE DETAIL (See Dwg. EP4270-20 / Sh 10 of 20)
NOT TO SCALE



T TYPICAL SOUTH EDGE DETAIL AT SAW MILL (See Dwg. EP4270-20 / Sh 10 of 20)
NOT TO SCALE

REVISIONS FOR SH. 9 & 10
ALP07ACRYL000 (100 #)



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CONSULTANTS

SEAL

APPROVED

CHIEF ENGINEER

DATE

ALB
DRAWN BY DATE

AS-BUILT BY DATE

CHECKED BY DATE

C. RATCLIFFE
PROJ. ENGR. DATE

MARK REVISION

BY

APP.

DATE

**PORTAC LOG SORT YARD
PAVING PROJECT - 1988**
REVISIONS - FOR PAVING DETAILS

DRAWING No. **EP-4270-20**
CONTRACT No. **646**
SHEET No. **R-9/10** OF **20**