

GUY DATA CHART

GUY WIRE SIZE	ELEVATION	GUY EAR PLATE (A-572)	THIMBLE END FITTING	PREFORM	TURN-BUCKLE	TOWER	SHACKLES	ANCHOR	PRIMARY INSULATOR	SECONDARY INSULATOR	GUY WIRE CUT LGTH	MINI TENSION LBS 60F
1" EHS	121.0'	10" X 5-3/4" X 1 1/4"	1"	1"	1"	1-1/2"	1-1/4"	1-1/8"	-	-	-	10,450
5/8" EHS	241.0'	10" X 4-1/2" X 1"	5/8"	5/8"	5/8"	1"	7/8"	3/4"	-	-	-	4,240
5/8" EHS	241.0'	10" X 4-1/2" X 1"	5/8"	5/8"	5/8"	1"	7/8"	3/4"	-	-	-	4,240
7/8" EHS	361.0'	10" X 4-1/2" X 1"	7/8"	7/8"	7/8"	1"	1"	1"	-	-	-	7,970
1" EHS	470.0'	10" X 5-3/4" X 1 1/4"	1"	1"	1"	1-1/2"	1-1/4"	1-1/8"	-	-	-	10,450

* REFERENCE E-1A FOR ANCHOR RADIUS AND GUY WIRE CUT LENGTH DUE TO DROPS AND RISES IN SURFACE GRADE.

DESIGNED ANTENNA LOADING

ANTENNA TYPE	ELEVATION	LINE
(12) 5' X 1' PCS PANELS	140'	(12) 1-5/8"
(12) 5' X 1' PCS PANELS	160'	(12) 1-5/8"
(12) 5' X 1' PCS PANELS	180'	(12) 1-5/8"
4' GRID	235'	7/8"
4' GRID	260'	7/8"
DRC-C 4 BAY W/RADOMES	280.8'-319.2'	3"
4' X 6' ICE SHIELD	329.2'	-
4' GRID	330'	7/8"
6' GRID	420'	7/8"
(3) DB224 W/LONG ARM MOUNTS	440'	7/8"
SHPX-5AE W/RADOMES	480.6'-522.7'	3"
A-2/3 LIGHT KIT W/SPUR CONDUIT	-	-

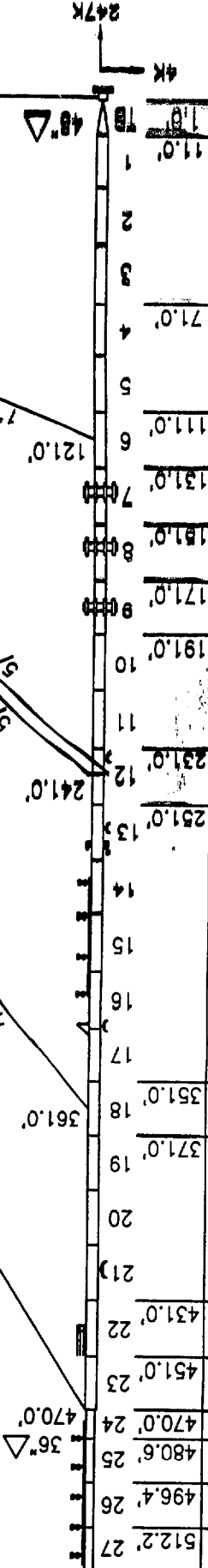
MATERIAL LIST

MARK	SIZE
A	1 1/8" S.R.
B	1 1/4" S.R.
C	12" X 1" PL.
D	7/8" S.R.
E	N/A
F	1 1/2" X 1/2"

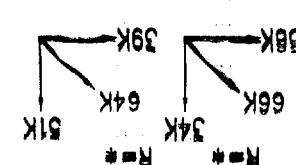
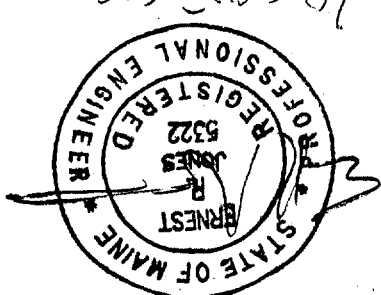
WEIGHT LIST

MARK	WEIGHT
G	1,475 LBS.
H	3,100 LBS.
J	1,770 LBS.
K	1,005 LBS.

- TOWER DESIGN NOTES**
- TOWER DESIGNED FOR A 80 MPH (70 MPH W/ 1/2" ICE) BASIC WIND SPEED [FASTEST MILE] IN ACCORDANCE WITH THE TIA/EIA-222-F STANDARDS. THIS IS EQUIVALENT TO 100 MPH (85 MPH W/ 1/2" RADIAL ICE) [2 SECOND GUST] WIND SPEED PER TABLE 1609.3.1 OF THE 2000 INTERNATIONAL BUILDING CODE.
 - WELD TOGETHER TRIANGULAR TOWER SECTIONS HAVE BOLTED CONNECTIONS. CONNECTIONS USE GALVANIZED V-ZS BOLTS, NUTS AND LOCKING DEVICES. INSTALLATION PER EA-222-F.
 - TOWER MEMBERS ARE "HOT DIPPED" GALVANIZED IN ACCORDANCE WITH ASTM A-123 AND A-153 STANDARDS.
 - 13C STEEL IS ASTM A572 GRADE 50 OR EQUAL. ALL OTHER STEEL IS A-36 UNLESS OTHERWISE SPECIFIED.
 - WELDS ARE FABRICATED WITH E8-70S-6 ELECTRODES.
 - LISTED WEIGHTS ARE ESTIMATES TO BE USED FOR INSTALLATION ERECTION PLANNING ONLY. IT SHALL BE THE RESPONSIBILITY OF THE ERECTOR TO VERIFY ALL SECTION WEIGHTS AT GROUND LEVEL PRIOR TO THE FINAL HOISTING OPERATION.



LEBS (ASTM A572-50 S.R.)	2 3/4"	2 1/2"	2"
SECTION A	7/8"	3/4"	3/4"
SECTION B	7/8"	1"	1 1/2" X 1/2"
SECTION C	7/8"	1"	7/8"
SECTION D	7/8"	1"	7/8"
SECTION E	7/8"	1"	7/8"
SECTION F	7/8"	1"	7/8"
SECTION G	7/8"	1"	7/8"
SECTION H	7/8"	1"	7/8"
SECTION I	7/8"	1"	7/8"
SECTION J	7/8"	1"	7/8"
SECTION K	7/8"	1"	7/8"
SECTION L	7/8"	1"	7/8"
SECTION M	7/8"	1"	7/8"
SECTION N	7/8"	1"	7/8"
SECTION O	7/8"	1"	7/8"
SECTION P	7/8"	1"	7/8"
SECTION Q	7/8"	1"	7/8"
SECTION R	7/8"	1"	7/8"
SECTION S	7/8"	1"	7/8"
SECTION T	7/8"	1"	7/8"
SECTION U	7/8"	1"	7/8"
SECTION V	7/8"	1"	7/8"
SECTION W	7/8"	1"	7/8"
SECTION X	7/8"	1"	7/8"
SECTION Y	7/8"	1"	7/8"
SECTION Z	7/8"	1"	7/8"

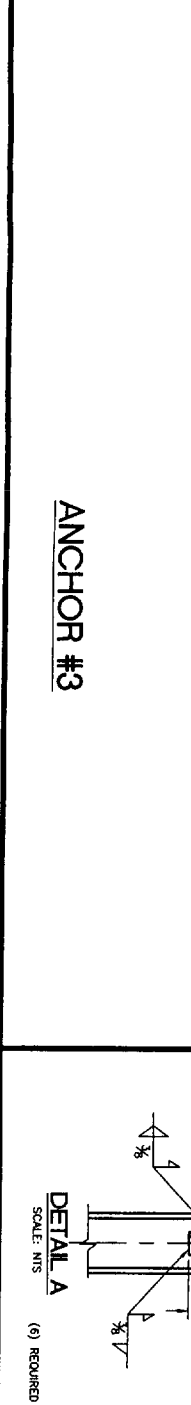
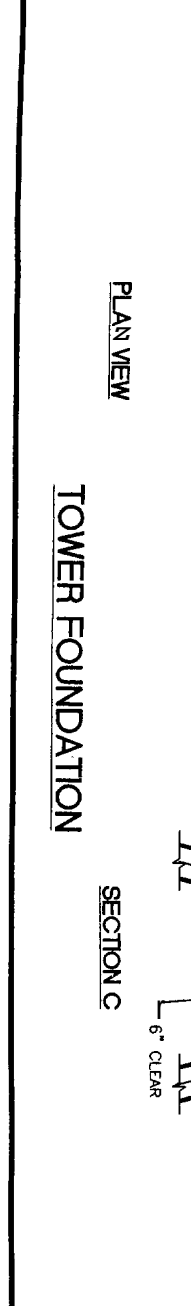
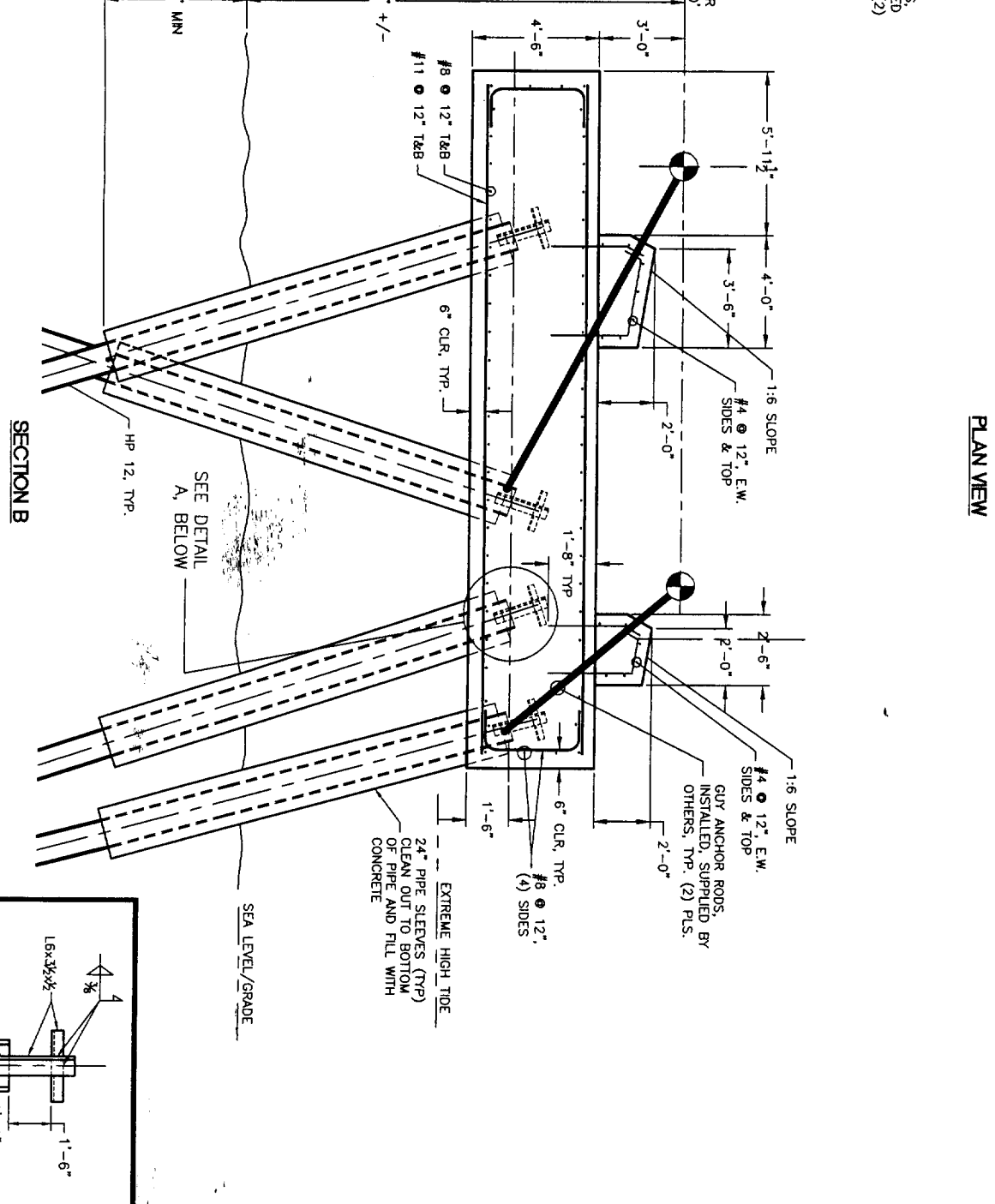
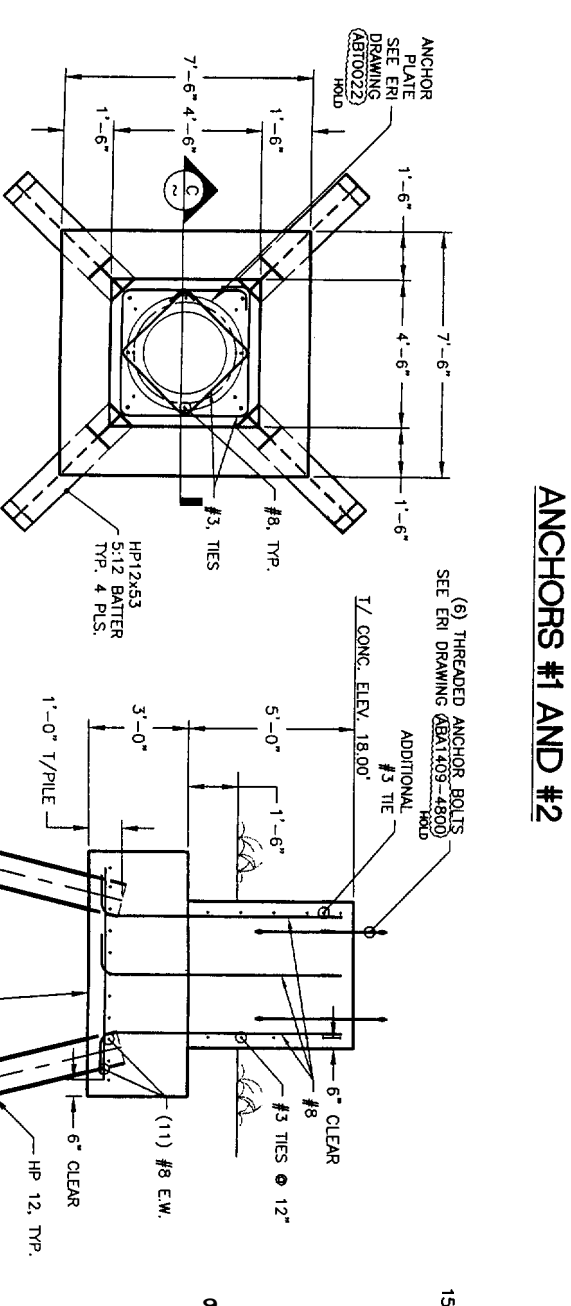
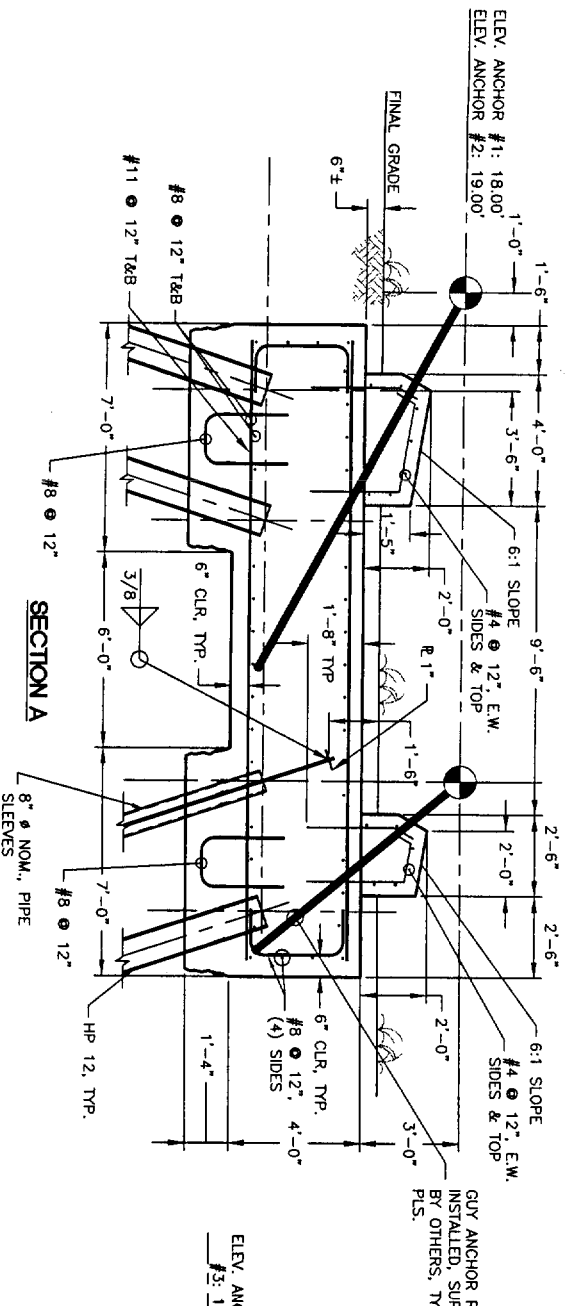
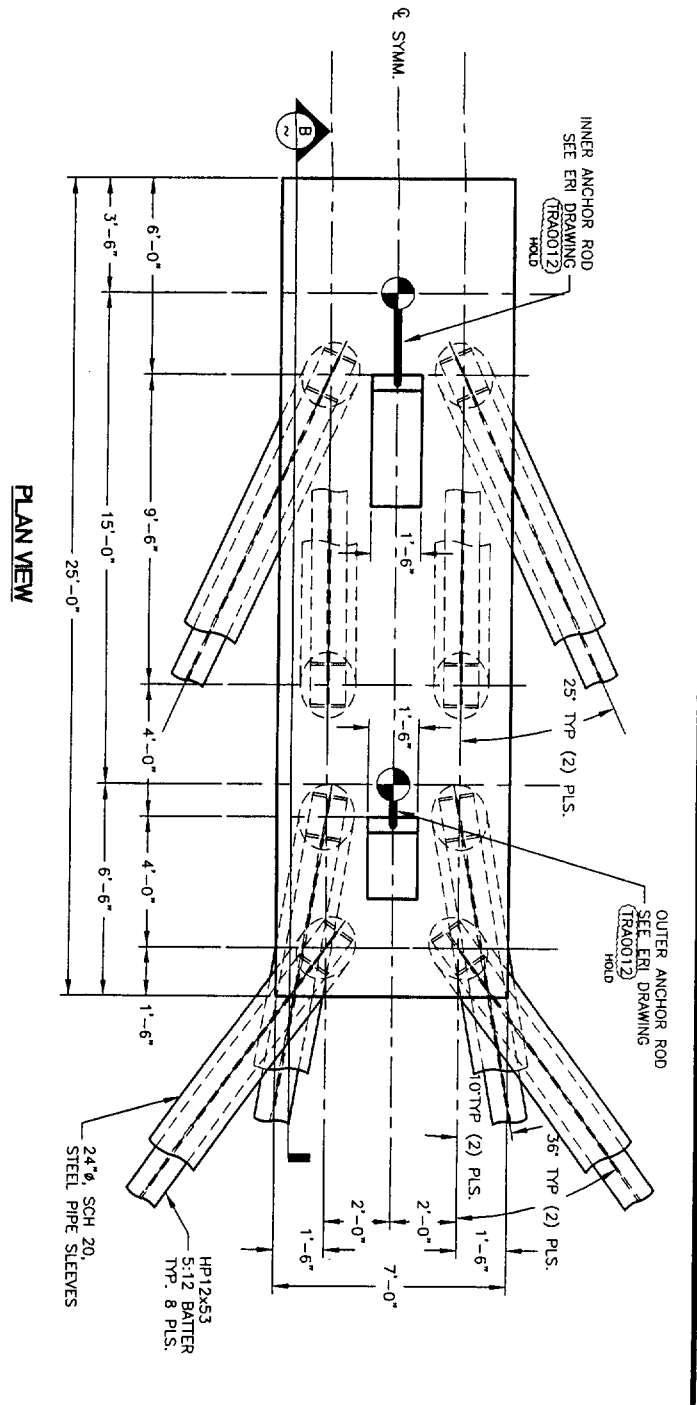
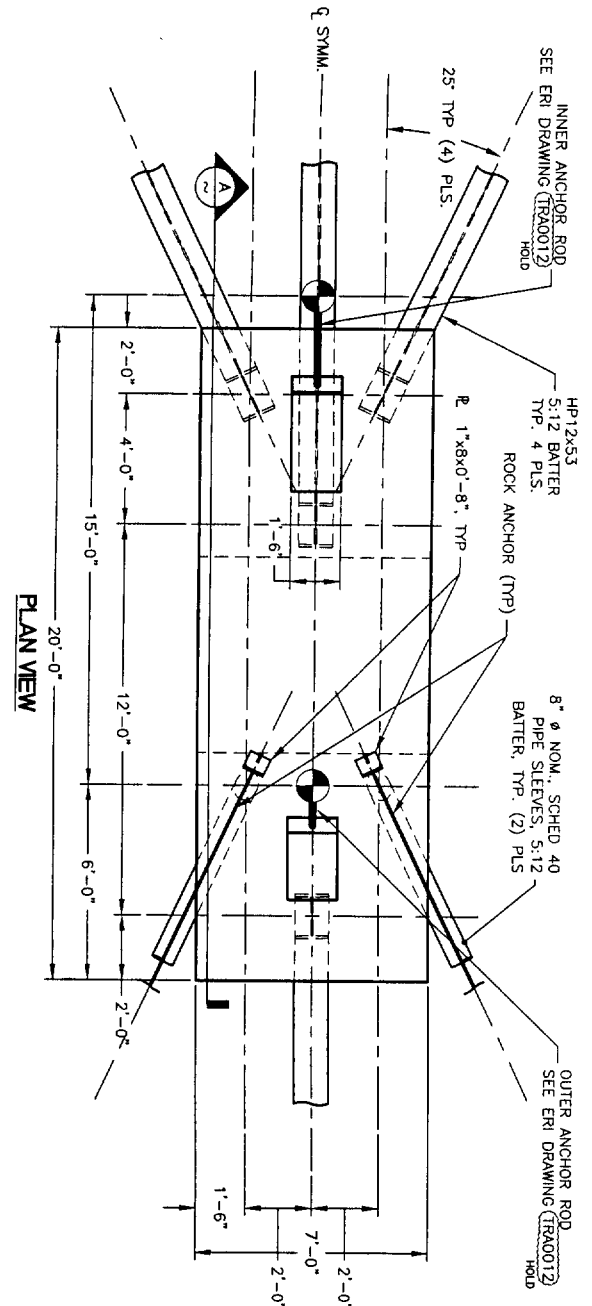


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NO	REVISION	APP'D	DATE
1			
2			
3			
4			
5			
6			

NAME: TOWER ELEVATION
 FOR: PORTLAND, ME
 DATE: 09/24/04
 DRAWN: [Signature]
 CHECKED: [Signature]
 SCALE: [Signature]
 PROJECT: [Signature]
 SHEET: E-1



REVISIONS		
No.	BY	DESCRIPTION
1	RCA	CLIENT REVIEW
2	RCA	PILE AND FOOTING REVISIONS
3	RCA	CONCRETE NOTE REVISION
4	RCA	LONGITUDINAL REINFORCING

No.	BY	DATE
1	RCA	6/22/04
2	RCA	10/05/04
3	RCA	10/13/04

PROJECT: **WMGX TOWER**
PORTLAND, ME
 FOR PORTLAND RADIO GROUP

SHEET TITLE:
TOWER BASE AND ANCHOR DETAILS

ASSOCIATED DESIGN PARTNERS INC.

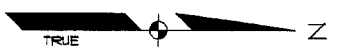
80 Leighton Rwd
 Falmouth, Maine 04105

Office: (207) 878-1751
 Fax: (207) 878-1788
 E-Mail: adp@adpengineering.com

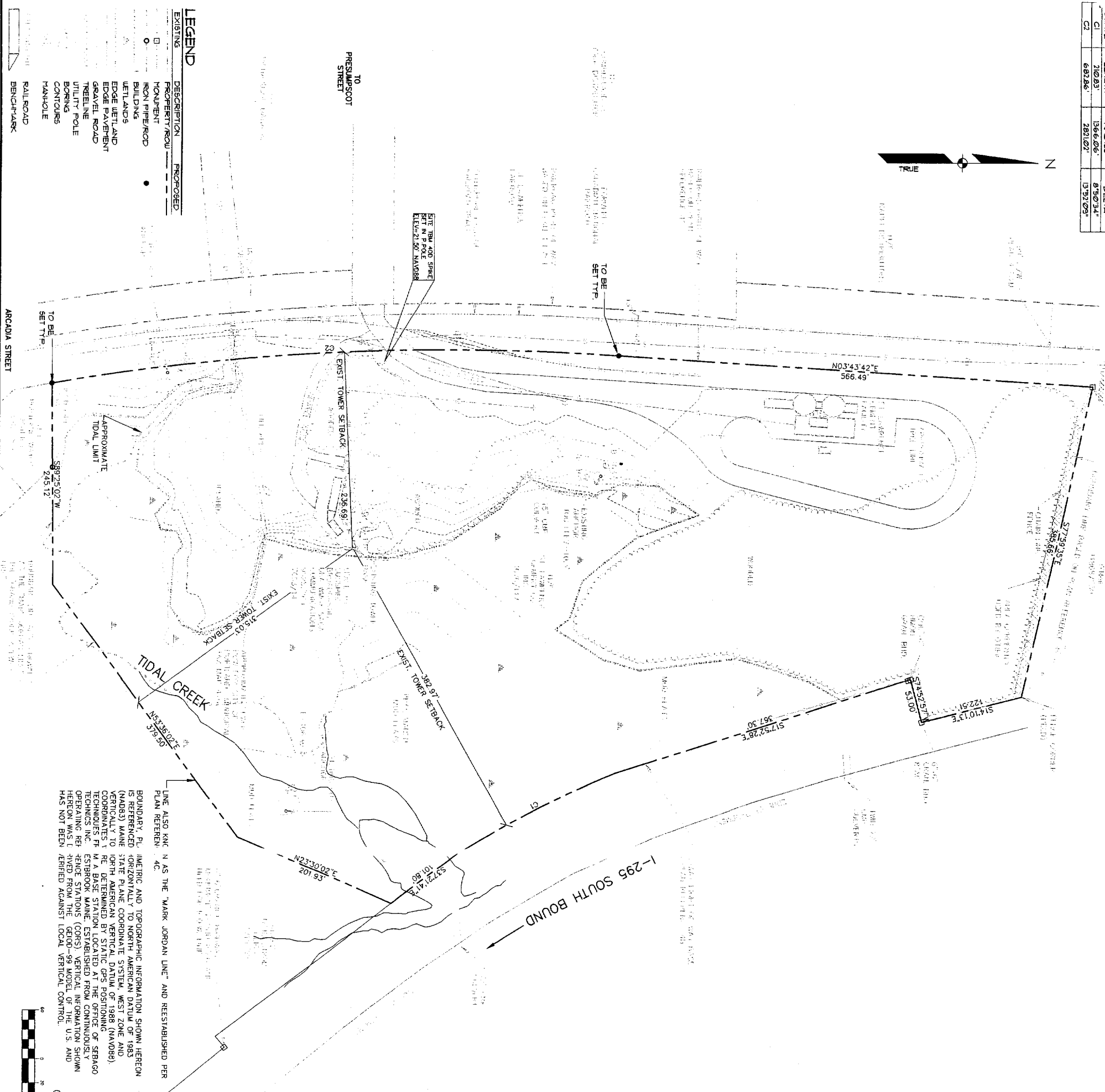
DATE: 06-22-04
 SCALE: 3/8" = 1'-0" (N/A)
 DRAWN BY: ANLEDGE
 PROJECT NUMBER: 04053

SHEET NO.: 102

CURVE	LENGTH	RADIUS	DELTA
C1	716.83	1566.06	85°03'4"
C2	687.86	2811.07	137°09'3"



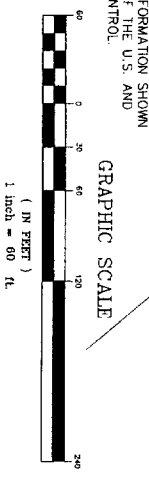
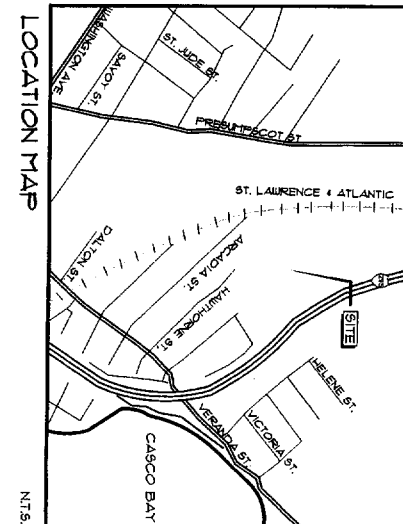
LEGEND	DESCRIPTION	PROPOSED
EXISTING	PROPERTY/ROAD	SOLID LINE
EXISTING	MONUMENT	SQUARE
EXISTING	IRON PIPE/ROD	CIRCLE
EXISTING	BUILDING	DIAGONAL LINE
EXISTING	WETLANDS	WAVE DASHED LINE
EXISTING	EDGE WETLAND	SPARSE DASHED LINE
EXISTING	GRAVEL ROAD	THICK DASHED LINE
EXISTING	TREELINE	DOTTED LINE
EXISTING	UTILITY POLE	CIRCLE WITH CROSS
EXISTING	BORING	CIRCLE WITH DOT
EXISTING	CONTOURS	DOTTED LINE
EXISTING	HANNOLE	SQUARE WITH X
EXISTING	RAILROAD	SOLID LINE WITH CROSS-TICKS
EXISTING	BENCHMARK	TRIANGLE



BOUNDARY PLANNING AND TOPOGRAPHIC INFORMATION SHOWN HEREON IS REFERENCED TO THE STATE PLANE COORDINATE SYSTEM, WEST ZONE AND DATUM OF 1983 (NAD83). THE STATE PLANE COORDINATE SYSTEM, WEST ZONE AND DATUM OF 1983 (NAD83) IS THE BASIS FOR THE CALCULATION OF ALL DISTANCES AND BEARINGS. THE STATE PLANE COORDINATE SYSTEM, WEST ZONE AND DATUM OF 1983 (NAD83) IS THE BASIS FOR THE CALCULATION OF ALL DISTANCES AND BEARINGS. THE STATE PLANE COORDINATE SYSTEM, WEST ZONE AND DATUM OF 1983 (NAD83) IS THE BASIS FOR THE CALCULATION OF ALL DISTANCES AND BEARINGS.

GENERAL NOTES

1. RECORD OWNER OF THE PROPERTY IS ST. LAWRENCE CEMENT INC. AS DESCRIBED IN BOOK 4876 PAGE 147 AT THE CUMBERLAND COUNTY REGISTER OF DEEDS. LEASE TO SAGA COMMUNICATIONS LIMITED PARTNERSHIP RECORDED IN BOOK 9525 PAGE 289 BY DEED DATED 1991 AND RECORDED IN SAID REGISTER OF DEEDS.
 2. THIS LOT IS LOCATED IN THE MODERATE IMPACT INDUSTRIAL (I-M) & SHORELAND ZONING DISTRICT. ACTUAL CONDITIONS: 588480 S.F. - 13.5 AC. WETLAND AREA: 252540 S.F. - 5.8 AC.
 3. THIS LOT IS LOCATED IN THE MODERATE IMPACT INDUSTRIAL (I-M) & SHORELAND ZONING DISTRICT. ACTUAL CONDITIONS: 588480 S.F. - 13.5 AC. WETLAND AREA: 252540 S.F. - 5.8 AC.
- MIN. LOT SIZE: 10,000 S.F.
 - MIN. FRONTAGE: 60 FT.
 - FRONT SETBACK: EACH STRUCTURE SHALL BE SETBACK 1 FOOT FROM THE FRONT PROPERTY LINE FOR EACH FOOT OF BUILDING HEIGHT.
 - SIDE SETBACK: EACH STRUCTURE SHALL BE SETBACK 1 FOOT FROM EACH SIDE PROPERTY LINE FOR EACH FOOT OF BUILDING HEIGHT UP TO 25 FEET, EXCEPT THAT THE MINIMUM SIDE YARD SHALL BE 35 FEET WHEN THE SIDE PROPERTY LINE ABUTS A RESIDENTIAL ZONE.
 - REAR SETBACK: EACH STRUCTURE SHALL BE SETBACK 1 FOOT FROM EACH REAR PROPERTY LINE FOR EACH FOOT OF BUILDING HEIGHT UP TO 25 FEET, EXCEPT THAT THE MINIMUM SIDE YARD SHALL BE 35 FEET WHEN THE SIDE PROPERTY LINE ABUTS A RESIDENTIAL ZONE.
 - MAX. IMPERVIOUS SURFACE RATIO: 75%
 - P.L.N.E.E.C.S.
 - PLAN ENTITLED "LAND IN PORTLAND, MAINE BELONGING TO EDWIN F. SMITH AND RUDOLPH L. VOILETT" PREPARED BY A.W.I. ENGINEERING CO. DATED NOVEMBER 1984.
 - PLAN ENTITLED "RIGHT OF WAY MAP STATE HIGHWAY 295" PREPARED BY THE MAINE STATE HIGHWAY COMMISSION DATED OCTOBER 1958 SHEET 5 OF 18 SITE FILE 3-132
 - PLAN ENTITLED "DEERING STATION MAP, ATLANTIC & ST. LAWRENCE RAILROAD" VALUATION 26, SHEET 21 DATED JUNE 20, 1917.
 - PLAN ENTITLED "PLAN OF LOTS ARCADIA PARK, EAST DEERING DISTRICT FOR F.A. MERRIAM & CO. BY LILEY & CUMMING, FOUND IN THE CORP. PLAN BOOK 10 PAGE 101.
 - PLAN ENTITLED "TOPOGRAPHIC SURVEY FOR WMGX RADIO TOWER" DEARBORN/WHITED NOT DATED OCTOBER 13, 1999.
 - PLAN ENTITLED "CEMENT DISTRIBUTION FACILITY, PORTLAND, MAINE" PREPARED FOR THE ST. LAWRENCE CEMENT CO. BY E.C. JORDAN CO., INC. DATED JULY 23, 1980.
 - PLAN ENTITLED "WMGX TOWER" BY JR. CHESEBRO, DATED SEPTEMBER 19, 1972.
 - PLAN ENTITLED "SITE PLAN FOR MAINE BEVERAGE COMPANY SERVICE INC. CUMBERLAND & YORK DISTRIBUTORS WAREHOUSE ADDITION" PREPARED BY BROWN CONSTRUCTION, INC. DATED OCTOBER 17, 1977.
 - CITY OF PORTLAND TAX MAPS 421, 426 AND 427.
 - PLAN ENTITLED "PORTLAND WATER DISTRICT ARCADIA STREET PUMP STATION", PREPARED BY H.I. & E.C. JORDAN, DATED NOVEMBER 13, 1972.
 - PLAN ENTITLED "CUMBERLAND & YORK DISTRIBUTORS", PREPARED BY H.I. & E.C. JORDAN, DATED MAY 12, 1970.
 - EXISTING CONDITION PLAN-OCTOBER CORPORATION INTERMEDIAL TRANSFER FACILITY PRESUMSCOT STREET BY SEVE & MAHER ENGINEER, INC. DATED MAY 4, 2001.
 - TOWER ORIENTATION SURVEY FOR WMGX RADIO TOWER BY SOLAW BAY CORP. DATED MARCH, 1994
 - PLAN OF VERANDA PARK BY FESSENDEN PARK CO. DATED JANUARY 30, 1904 AND RECORDED IN THE CORP. IN PLAN BOOK 10, PAGE 55.



EXISTING CONDITIONS SURVEY
OF THE
SUNSHINE BROADCASTING WMGX TOWER
167 PRESUMSCOT STREET
PORTLAND, MAINE
FOR:
SAGA COMMUNICATIONS, INC.
420 WESTERN AVE
SOUTH PORTLAND, MAINE 04106

RECORD OWNER:
ST. LAWRENCE CEMENT, INC.
3 COLUMBIA CIR.
ALBANY, NY 12203

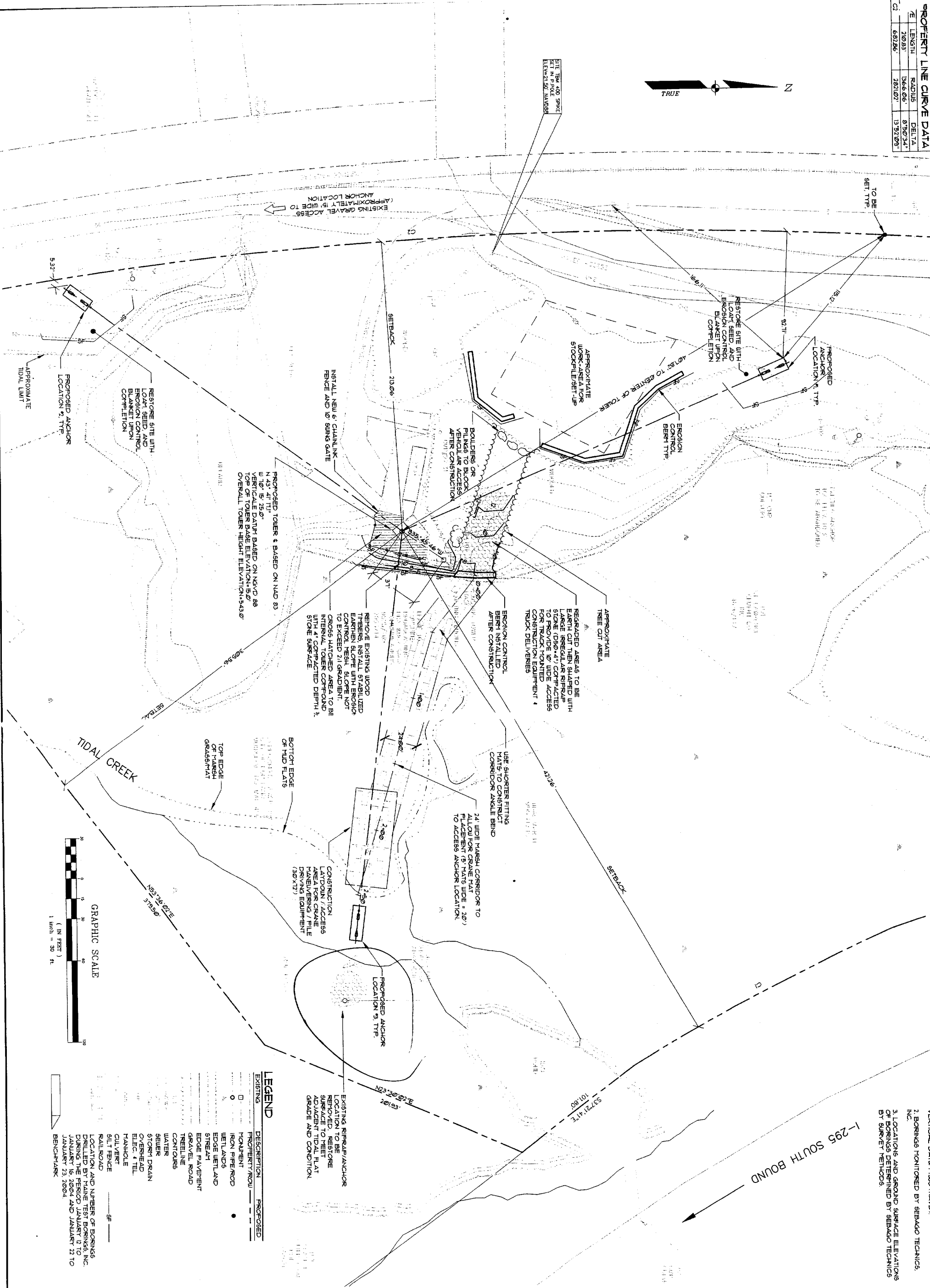
Sebago Technics
Engineering Expertise You Can Build On
One Chabot Street
Westbrook, Me 04098-1339
Tel (207) 856-0277

PROJECT NO.	FIELD BOOK	DESIGN	CHKD	DRAWN
03497		CLB	CLB	JNB

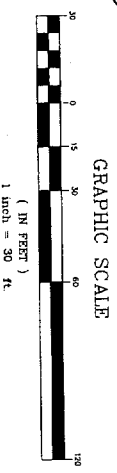
#	BY	DATE	STATUS

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNIQS, INC. ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHNIQS, INC.

PROPERTY LINE CURVE DATA			
E	LENGTH	RADIUS	DELTA
1	210.83	1366.06'	8°50'34"
2	681.26	2811.02'	13°52'09"



- ELEVATIONS REFERENCED TO NORTH AMERICAN VERTICAL DATUM 1988 (NAVD).
- BORINGS MONITORED BY SEBAGO TECHNICS, INC.
- LOCATIONS AND GROUND SURFACE ELEVATIONS OF BORINGS DETERMINED BY SEBAGO TECHNICS BY SURVEY METHODS.



LEGEND

EXISTING	DESCRIPTION	PROPOSED
□	PROPERTY ROW	---
○	MONUMENT	●
—	IRON PIPE/ROD	—
—	WETLANDS	—
—	EDGE WETLAND	—
—	STREAM	—
—	EDGE PAVEMENT	—
—	GRAVEL ROAD	—
—	TREELINE	—
—	CONTOURS	—
—	WATER	—
—	SEWER	—
—	STORM DRAIN	—
—	OVERHEAD ELEC. & TEL.	—
—	MANHOLE	—
—	CULVERT	—
—	SILT FENCE	—
—	RAILROAD	—

EXISTING RIPRAP/ANCHOR LOCATION TO BE REMOVED. RESTORE SURFACE TO MEET ADVANCED TIDAL FLAT GRADE AND CONDITION.

LOCATION AND NUMBER OF BORINGS DRILLED BY MAINE TEST BORINGS, INC. DURING THE PERIOD JANUARY 12 TO JANUARY 23, 2004 AND JANUARY 22 TO BENCHMARK

SITE PLAN
OF THE:
528' TOWER REPLACEMENT PROJECT
167 PRESUMSCOT STREET
PORTLAND, MAINE
FOR:
SAGA COMMUNICATIONS, INC.
40 WESTERN AVE
SOUTH PORTLAND, MAINE 04106

RECORD OWNER:
ST. LAWRENCE CEMENT, INC.
3 COLUMBIA CIR
ALBANY, NY 12203

DATE: 05-28-04
SCALE: 1" = 30'

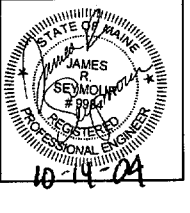
SHEET 1 OF 2

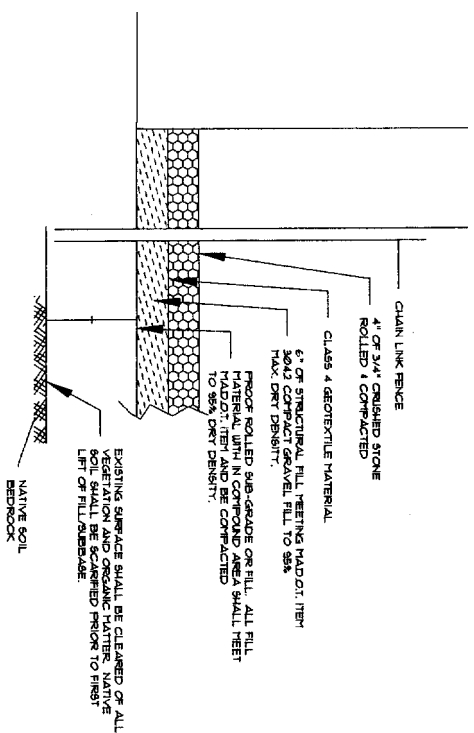
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PROJECT NO.	FIELD BOOK	DESIGN	CHKD	DRAWN
03497	CLB	CLB	CLB	JNB

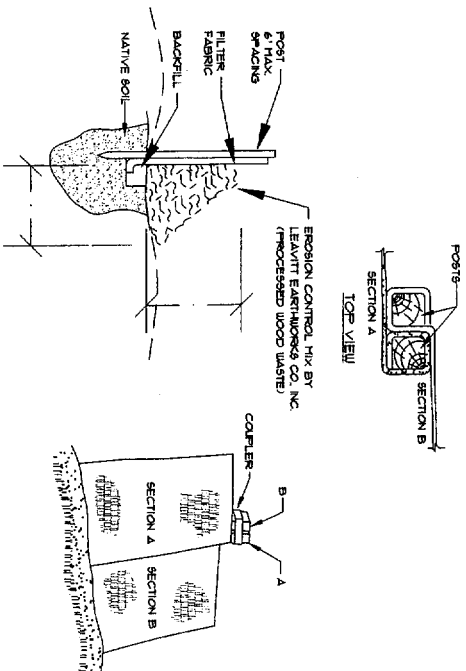
REV.	BY:	DATE:	STATUS:
B	JRS	8-30-04	BANK & RIPRAP ANCHOR REMOVAL PER D.E.P. COMMENTS
A	JRS	5-28-04	NRPA/DEP APPLICATION SUBMISSION

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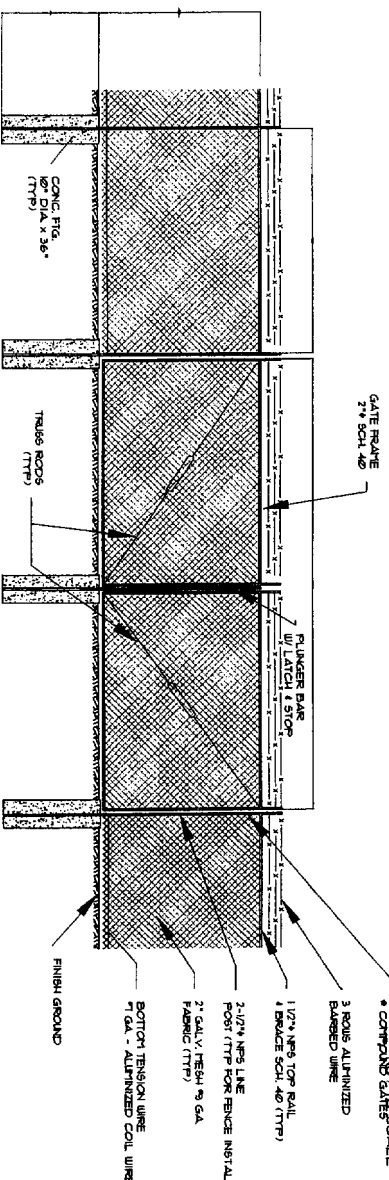


SITE AREA SURFACING
NOT TO SCALE

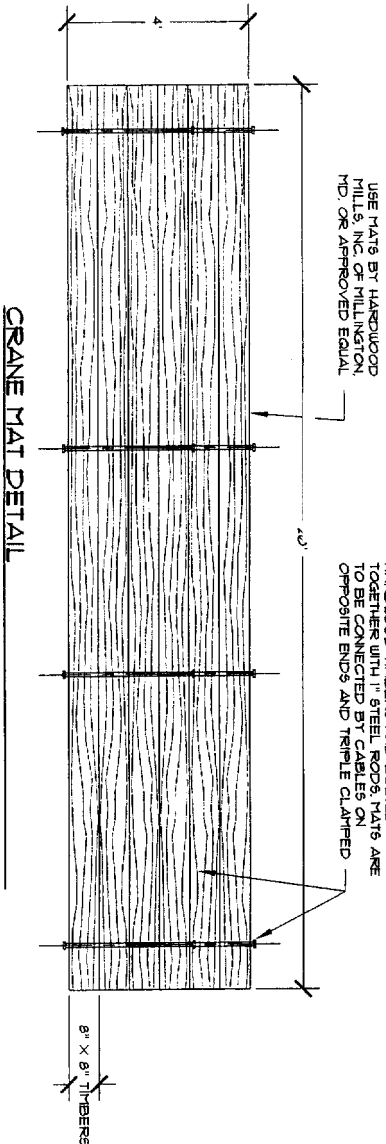


- INSTALLATION:**
1. EXCAVATE A 6" X 6" TRENCH ALONG THE LINE OF PLACEMENT FOR THE FILTER BARRIER.
 2. UNROLL A SECTION AT A TIME AND POSITION THE POSTS AGAINST THE BACK (DOWNSTREAM) WALL OF THE TRENCH.
 3. DRIVE POSTS INTO THE GROUND UNTIL APPROXIMATELY 2" OF FABRIC IS LYING ON THE TRENCH BOTTOM.
 4. LAY THE TOP-N-LAP OF FABRIC ONTO THE UNDISTURBED BOTTOM OF THE TRENCH. BACKFILL THE TRENCH AND TAMP THE SOIL. TOP-N CAN ALSO BE ACCOMPLISHED BY BACKFILLING THE TRENCH WITH 2" OF SAND OR GRAVEL. TAMPING FILL AT THE BASE BUT MUST BE ACCOMPANIED BY AN INTERSECTION DITCH.
 5. JOIN SECTION AS SHOWN ABOVE.
 6. BARRIER SHALL BE THRU-BILT FENCE OR EQUAL.

FILTER BARRIER / EROSION CONTROL BERM



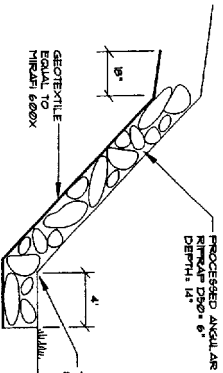
TYPICAL FENCE SECTION
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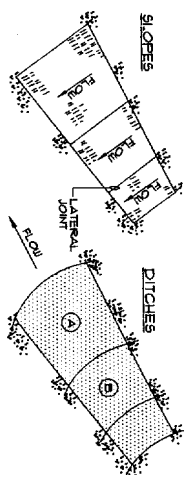
CRANE MAT DETAIL
SCALE

USE MATS BY HARDWOOD MILLS, INC. OR MILLINGTON, MD. OR APPROVED EQUAL.

MATS ARE TO CONSTRUCTED OF HARDWOOD TIMBERS AND BOLTED TOGETHER WITH 1\"/>

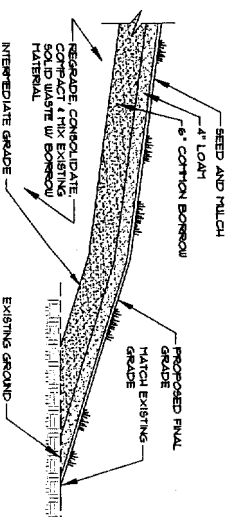


SIDE SLOPE RIPRAP
NOT TO SCALE



- NOTES:**
1. PLACE TOP END OF THE RIPRAP MATERIAL IN A 4" TRENCH.
 2. BACKFILL AND TAMP TRENCH SECURE END WITH STAPLES AT 6" SPACING. 4" DRAIN FROM EXPOSED END.
 3. FLOOR DIRECTION JOINTS TO HAVE UPPER END OF LOWER STRIP BARRIED WITH UPPER LAYERS OVERLAPPED 4" AND STAPLED OVERLAP 4" OVER A.
 4. LATERAL JOINTS TO HAVE 4" OVERLAP OF STRIPS STAPLED B' ON CENTER.
 5. STAPLE OUTSIDE LATERAL EDGE 2" ON CENTER.
 6. WIRE STAPLES TO BE MN. OF 1/8" WIRE 6" LONG AND 1-1/2" WIDE.
 7. USE NORTH AMERICAN GREEN D3 B90 OR APPROVED EQUAL.

EROSION CONTROL BLANKET
NOT TO SCALE



TYPICAL COVER SECTION
NOT TO SCALE

EROSION AND SEDIMENTATION CONTROL PLAN

A. PRE-CONSTRUCTION PHASE

BEFORE TO THE BEGINNING OF ANY CONSTRUCTION FILTER FABRIC PLACING WILL BE STAKED ACCORD TO THE SLOPE(S) ON THE CONTRACT. AT OR JUST BELOW THE LIMITS OF CLEARING OR GRASSING, AND/OR JUST ABOVE ANY ADJACENT PROTECTIVE FENCE OR THE PLACEMENT OF SILT FENCES SHALL BE COMPLETED IN ACCORDANCE WITH GUIDELINES ESTABLISHED IN BEST PRACTICES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ADJACENT PROPERTIES AND IN ACCORDANCE WITH THE PROTECTION MAINTAINED BY THE CONTRACTOR UNTIL ALL EXPOSED SLOPES HAVE AT LEAST 80-90% VIGOROUS PERENNIAL VEGETATIVE COVER TO PREVENT EROSION. TO ANY CLEARING OR GRASSING A CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED AT THE INTERSECTION WITH THE PROPOSED ACCESS DRIVE AND THE EXISTING ROADWAY TO AVOID TRACKING OF MUD, DIRT AND DEBRIS ONTO THE SITE. THE CONTRACTOR SHALL PREPARE A DETAILED SCHEDULE AND TYPED UP PLAN INDICATING AREAS AND COMPONENTS OF THE WORK AND THE DATES INDICATING DATES OF START AND COMPLETION OF THE WORK. THE CONTRACTOR SHALL PROVIDE A SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE MUNICIPAL STREET THREE CORNERS OF THE SCHEDULE AND TYPED UP PLAN SHALL BE PROVIDED TO THE MUNICIPAL STREET THREE CORNERS. ATTENTION SHALL BE GIVEN TO THE 14 DAY LIMIT OF DISTURBANCE IN THE SCHEDULE ADDRESSING TEMPORARY AND PERMANENT VEGETATION RESTORATION. RESTORATION SHALL BE FOLLOWED BY THE CONTRACTOR THROUGHOUT CONSTRUCTION OF THE PROJECT.

B. CONSTRUCTION AND POST-CONSTRUCTION PHASE

1. ALL AREAS UNDERGOING ACTUAL CONSTRUCTION SHALL ONLY EXPOSE THAT AMOUNT OF HERBACEOUS SOIL NECESSARY FOR PROGRESSIVE AND THAT WILL NOT BE COVERED WITH EROSION CONTROL. EROSION CONTROL SHALL BE INSTALLED WITHIN 14 DAYS OF DISTURBANCE SHALL BE ACCOMPLISHED WITH PERMANENT EROSION CONTROL. EROSION CONTROL SHALL BE INSTALLED WITHIN 14 DAYS OF DISTURBANCE SHALL BE ACCOMPLISHED WITH PERMANENT EROSION CONTROL. EROSION CONTROL SHALL BE INSTALLED WITHIN 14 DAYS OF DISTURBANCE SHALL BE ACCOMPLISHED WITH PERMANENT EROSION CONTROL. EROSION CONTROL SHALL BE INSTALLED WITHIN 14 DAYS OF DISTURBANCE SHALL BE ACCOMPLISHED WITH PERMANENT EROSION CONTROL.

2. ALL TRENCHES SHALL BE COLLECTED, STOCKPILED, SEEDING WITH RYE GRASS OR OTHER APPROPRIATE SEEDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ADJACENT PROPERTIES AND IN ACCORDANCE WITH THE PROTECTION MAINTAINED BY THE CONTRACTOR UNTIL ALL EXPOSED SLOPES HAVE AT LEAST 80-90% VIGOROUS PERENNIAL VEGETATIVE COVER TO PREVENT EROSION.

3. ALL SILT FENCES AND EROSION CONTROL REQUIRES SHALL BE INSTALLED ACCORDING TO THIS PLAN. THESE SHALL BE MAINTAINED DURING CONSTRUCTION. EROSION CONTROL REQUIRES SHALL BE INSPECTED BEFORE AND AFTER ANY RAINFALL OR WINDY EVENT MAINTAINED AND CLEANED UNTIL ALL AREAS HAVE AT LEAST 80-90% VIGOROUS PERENNIAL VEGETATIVE COVER OF GRASSES.

4. A CONSTRUCTION ENTRANCE SHALL BE BUILT AT THE INTERSECTION OF THE PROPOSED DRIVE AND EXISTING DRIVE TO AVOID TRACKING OF MUD, DIRT OR DEBRIS FROM THE CONSTRUCTION AREA DIRT CONTROL. DURING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ADJACENT PROPERTIES AND IN ACCORDANCE WITH THE PROTECTION MAINTAINED BY THE CONTRACTOR UNTIL ALL EXPOSED SLOPES HAVE AT LEAST 80-90% VIGOROUS PERENNIAL VEGETATIVE COVER TO PREVENT EROSION.

C. VEGETATION RESTORATION REQUIRES SHALL COMPLY WITH THE FOLLOWING VEGETATION PLAN.

1. FOUR INCHES OF LOAM WILL BE SPREAD OVER DISTURBED AREAS AND TOP SOIL SHALL BE REPLACED TO THE ORIGINAL DEPTH. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ADJACENT PROPERTIES AND IN ACCORDANCE WITH THE PROTECTION MAINTAINED BY THE CONTRACTOR UNTIL ALL EXPOSED SLOPES HAVE AT LEAST 80-90% VIGOROUS PERENNIAL VEGETATIVE COVER TO PREVENT EROSION.

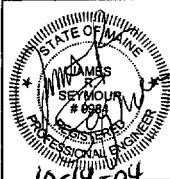
2. SOIL TESTS SHALL BE TAKEN AT THE TIME OF SOIL STRIPPING TO DETERMINE FERTILIZATION REQUIRES. SOIL TEST SHALL BE TAKEN PROPORTIONALLY TO NOT INTERFERE WITH THE 14 DAY LIMIT ON SOIL STRIPPING.

3. ALL LAY BALE AND/OR FILTER FABRIC BARRIERS WILL REMAIN IN PLACE UNTIL SEEDS HAVE BECOME 80-90% ESTABLISHED AND THEN REMOVED WITHIN 10 DAYS.

4. EROSION CONTROL TECH SHALL BE APPLIED IN ACCORDANCE WITH THE PLANS OVER ALL FINISH SEEDING AREAS AS SPECIFIED ON THE DESIGN PLANS.

5. THE INSPECTING ENGINEER AT HIS/HER DISCRETION MAY REQUIRE ADDITIONAL PROVISIONS TO MAINTAIN STABILITY OF EXISTING AND FINISH GRADED AREAS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ADJACENT PROPERTIES AND IN ACCORDANCE WITH THE PROTECTION MAINTAINED BY THE CONTRACTOR UNTIL ALL EXPOSED SLOPES HAVE AT LEAST 80-90% VIGOROUS PERENNIAL VEGETATIVE COVER TO PREVENT EROSION.

6. THE INSPECTING ENGINEER AT HIS/HER DISCRETION MAY REQUIRE ADDITIONAL PROVISIONS TO MAINTAIN STABILITY OF EXISTING AND FINISH GRADED AREAS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ADJACENT PROPERTIES AND IN ACCORDANCE WITH THE PROTECTION MAINTAINED BY THE CONTRACTOR UNTIL ALL EXPOSED SLOPES HAVE AT LEAST 80-90% VIGOROUS PERENNIAL VEGETATIVE COVER TO PREVENT EROSION.



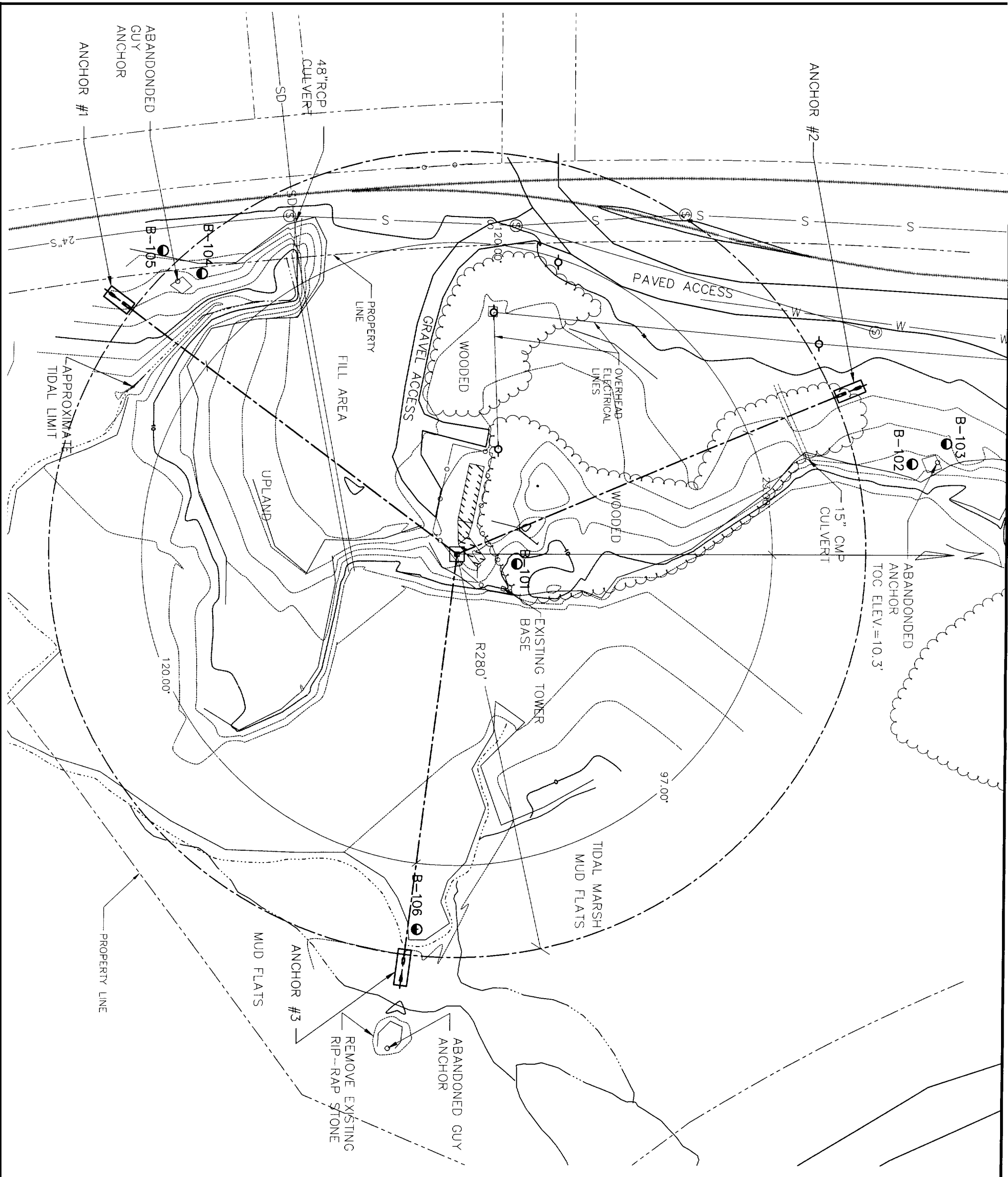
REV:	A	JRS	5-28-04	DATE:	STATUS:
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Sebago Technics
Engineering Expertise You Can Build On
One Chabot Street
Westbrook, Me 04098-1339
Tel (207) 856-0277

PROJECT NO.	FIELD BOOK	DESIGN	CHKD	DRAWN
03497		JRS	CLB	BGY

DETAILS
528' TOWER REPLACEMENT PROJECT
167 PRESUMPSCOT STREET
PORTLAND, MAINE
FOR: SAGA COMMUNICATIONS, RECORD OWNER.
420 WESTERN AVE. ST. LAWRENCE CEMENT, INC.
SOUTH PORTLAND, MAINE 04106 3 COLUMBIA CIR
ALBANY, NY 12203

DATE: 05-28-04
SCALE: AS NOTED
SHEET 2 OF 2



- CONCRETE**
1. ALL CONCRETE WORK AND MATERIAL SHALL CONFORM TO THE 2012 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND ACI 308.3R SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS.
 2. CONCRETE COMPRESSIVE STRENGTH SHALL BE A MINIMUM OF 4,000 PSI AT 28 DAYS AND A MAXIMUM WATER-CEMENT RATIO OF 0.45.
 3. CONCRETE IN ANCHOR #1 SHALL HAVE 3 GALLONS PER CUBIC YARD OF DCL'S CORROSION INHIBITOR BY W.R. GRACE, ADDED IN ACCORDANCE WITH THE MANUFACTURER'S SUGGESTED PRACTICES. ALL OTHER CONCRETE SHALL HAVE 2 GALLONS PER CUBIC YARD OF DCL'S.
 4. ENTRAINED AIR IN THE CONCRETE SHALL BE 6% ± 1%.
 5. REINFORCING STEEL SHALL BE GRADE 60, DEFORMED BARS CONFORMING TO ASTM A-615.
 6. CONTRACTOR TO SUBMIT MILL PARTICULATION FOR REINFORCING STEEL AND DESIGN FOR CONCRETE SEVEN DAYS PRIOR TO CONSTRUCTION.

- PILES**
1. PILES SHALL BE HP12X33 WITH A MINIMUM DESIGN STRESS OF 50 KSI, AND SHALL CONFORM TO ASTM A572-50, GRADE 50, A 24 GRADE 50, OR A 588 GRADE 50.
 2. PILES SHALL BE FITTED WITH DRIVING POINTS.
 3. PILES SHALL BE DRIVEN TO BEARING IN DELTA 100% OF THE DESIGN LOAD TEST. THE DELTA SHALL BE THE AVERAGE OF THE DESIGN ENERGY PER BLOW, AT FINAL PENETRATION RESISTANCE EQUAL TO 10 BLOWS PER INCH FOR THE FINAL 6 INCHES OF DRIVING IS REQUIRED. IF ABRUPT REFUSAL IS ENCOUNTERED, DRIVING MAY BE REINTEGRATED WHEN THE PILE PENETRATION IS LESS THAN 5" FOR TEN SUCCESSIVE BLOWS.
 4. AT ANCHOR #1, DRIVE 24" DIA., SCH. 20 PIPE CONCENTRIC WITH PILES, TO 5'-0" BELOW MID LINE, CLEAN SOIL FROM INSIDE PIPE AND FILL WITH CONCRETE.
 5. ONE PILE SHOULD BE LOAD TESTED TO 100% OF THE DESIGN LOAD TEST. THE CONTRACTOR SHALL SUBMIT THE INSTALLATION OF THREE PRODUCTION PILES AT SEPARATE LOCATIONS USING CASE-COUBLE PILE DRIVING ANALYZER EQUIPMENT TO VERIFY THAT THE PILES ACHIEVE 300 KIP CAPACITY. MONITORING WITH PILE DRIVING ANALYZER IN LIEU OF LOAD TEST WILL REQUIRE APPROVAL OF THE LOCAL BUILDING OFFICIAL.
 6. WHERE INDICATED ON THE DRAWING, ROCK ANCHORS SHALL BE INSTALLED INSIDE THE WEB OF THE PILES TO RESIST UPLIFT. ANCHORS SHALL BE 1 3/8" DIAMETER UPSET THREADED STEEL BARS CONFORMING TO ASTM A772, TYPE II, GRADE 159 KSI.
 7. ROCK ANCHORS SHALL BE SMALLER THAN A MINIMUM HOLE LENGTH INTO BEDROCK OF 26 FEET. THE HOLE SHOULD BE OVER BORED AT LEAST 6" DIAMETER MADE WITH AIR PERCUSSION DRILLING TECHNIQUES TO PROVIDE A ROUGH SURFACE.
 8. ROCK ANCHORS SHALL BE GROUTED INTO THE BEDROCK WITH EITHER PORTLAND CEMENT GROUT OR EPOXY RESIN. CEMENT GROUT SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 6,000. EPOXY GROUT MUST BE TREMLED OR PUMPED INTO THE HOLE.
 9. ROCK ANCHORS SHALL BE PROOF TESTED TO 189 KIPS (150% OF DESIGN CAPACITY) AND LOCKED OFF AT 71 KIPS (50 % OF DESIGN CAPACITY).
 10. THE TOP 15 FEET OF 4" DIAMETER PIPE SHALL BE REMOVED. THE ENTIRE LENGTH OF 24" DIAMETER PIPE SHALL BE REMOVED. THE ANCHOR LINE BITUMASTIC 300M COAT 748 FROM THE ENGINEER. COATING SHALL BE A MINIMUM OF 20 MILS, DRY FILM THICKNESS.

- SURFACE PREPARATION FOR COATING:** FIRST REMOVE VISIBLE OIL, GRASS, AND DRAWING CLEANING PER SSPC SP 10. THE SURFACE PREPARATION BY NEAR WHITE BLAST CLEANING. REMOVE RESIDUAL DUST FROM OIL-FREE AIR, VACUUMING, OR SWEEPING. PROVIDE SURFACE PROFILE OF AT LEAST 2 MIL THICKNESS, PER SSPC SP 10.
- DESIGN LOADS**
- TOWER BASE DESIGN BASED ON LOADING INFORMATION PROVIDED BY ELECTRONICS RESEARCH, INC. (E.R.I.) 7777 GARDNER RD. CLANDLER, INDIANA, E.R.I. LOADS GENERATED UTILIZING IBC DESIGN CRITERIA.

ASSOCIATED DESIGN PARTNERS INC.

80 Leighton Road
Falmouth, Maine 04105

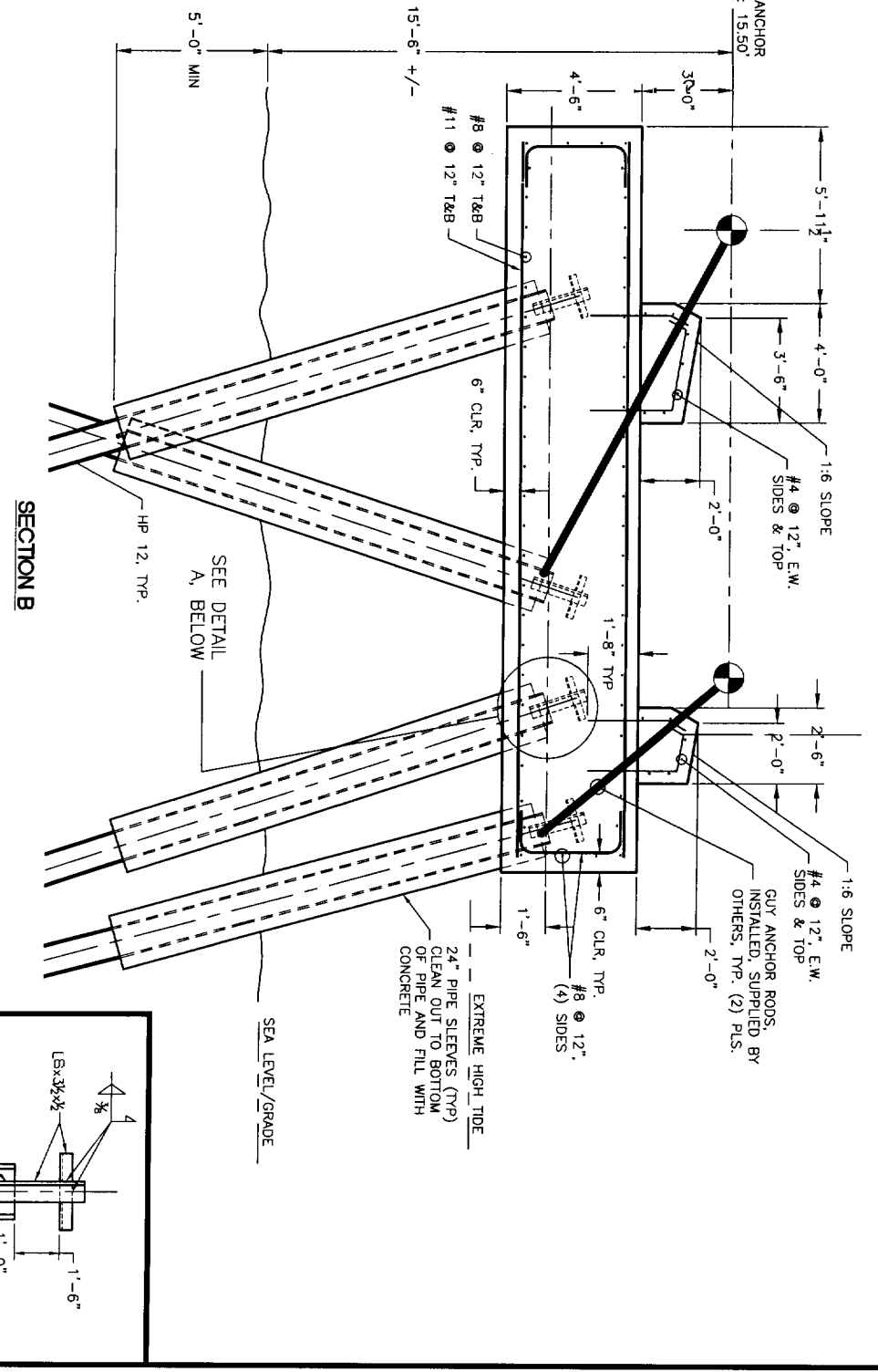
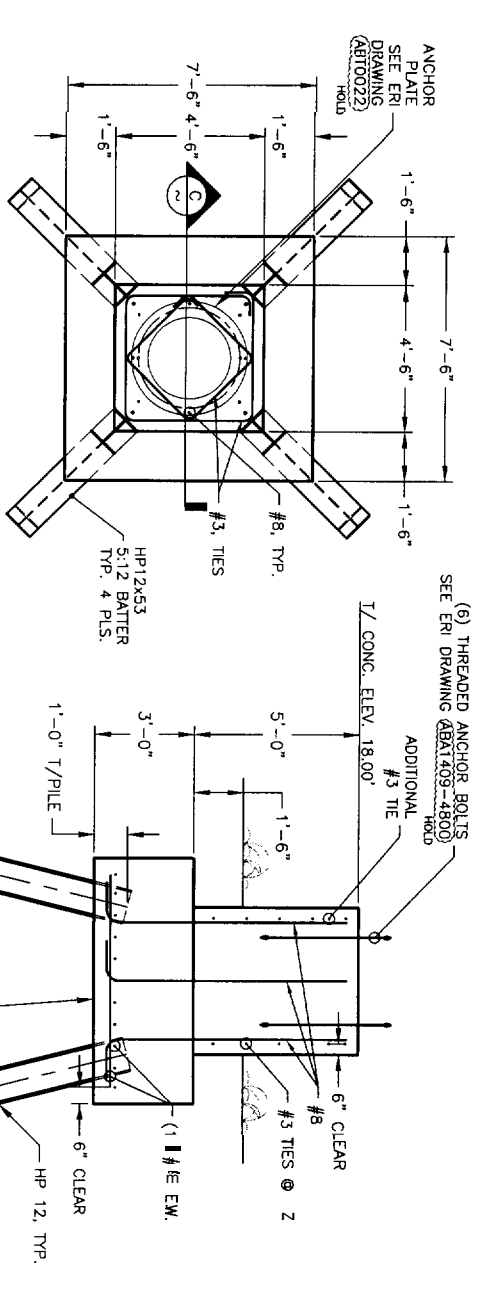
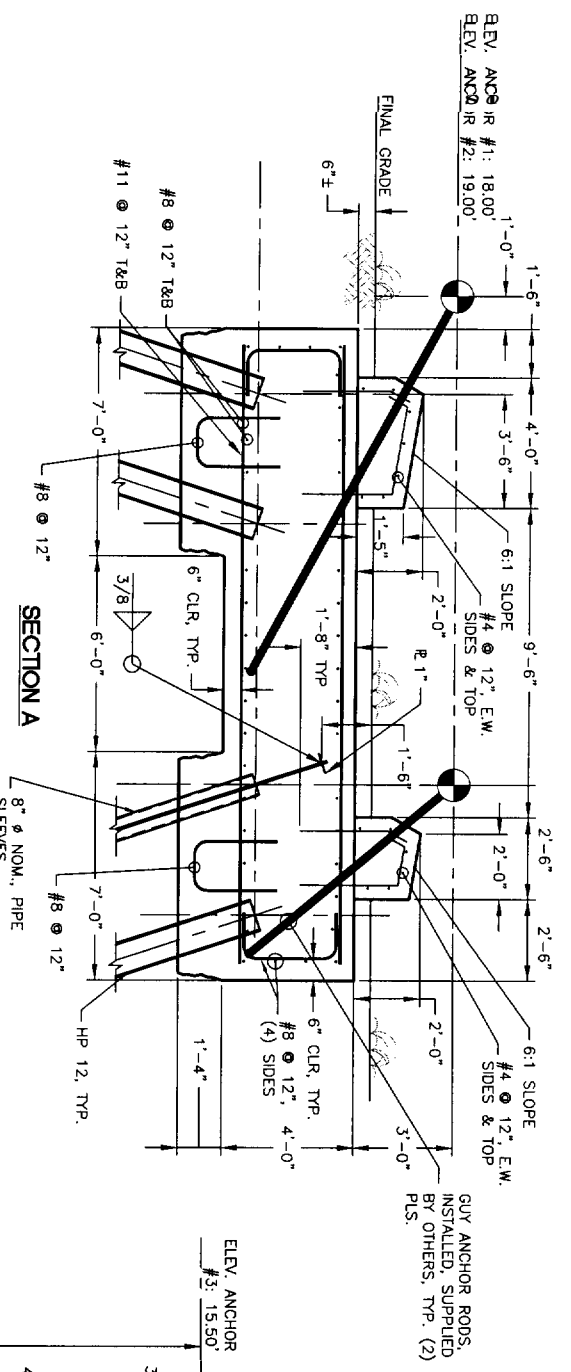
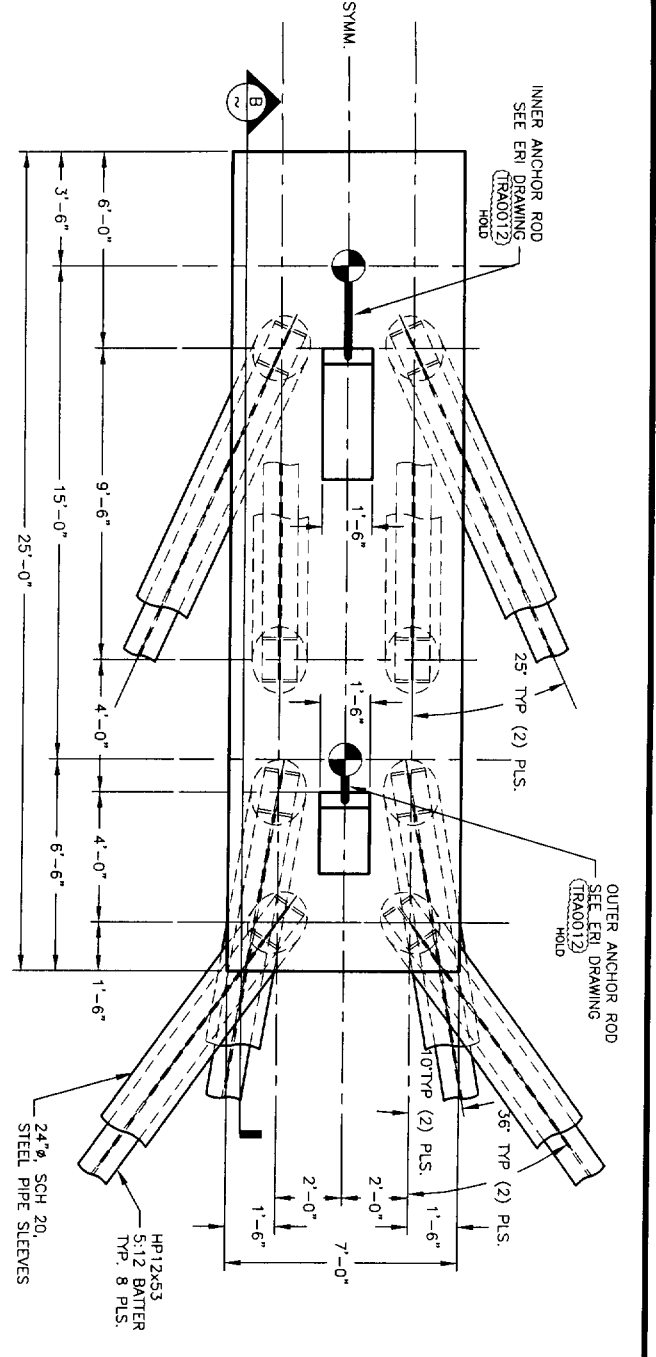
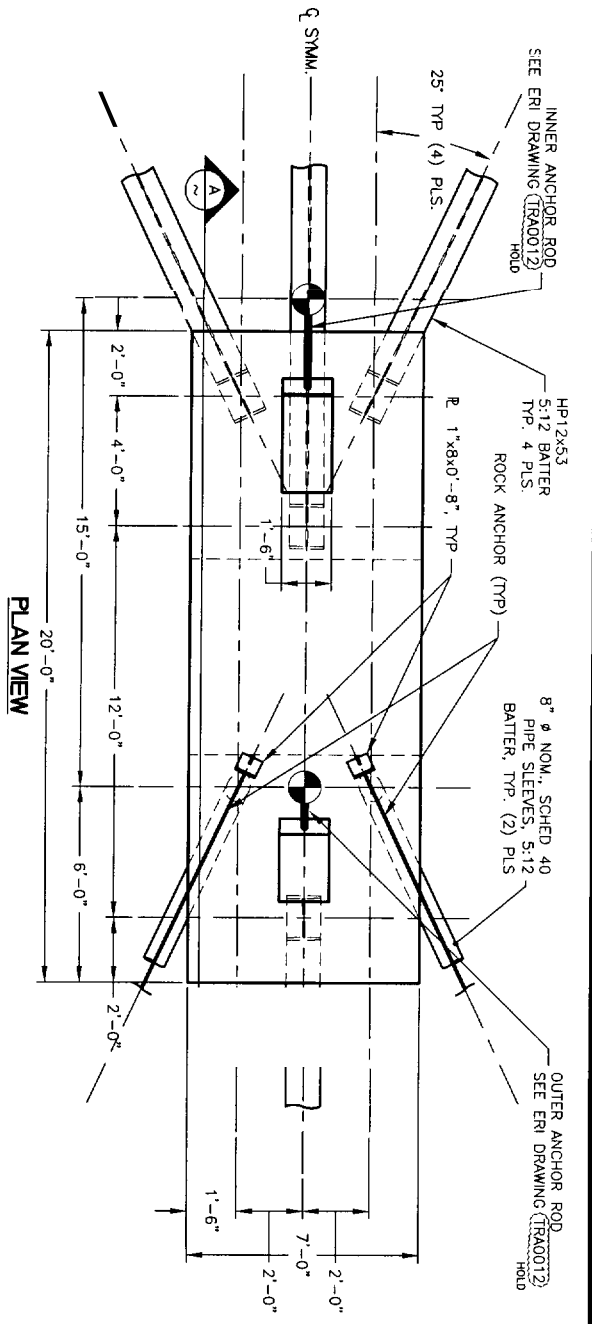
Office: (207) 878-1751
Fax: (207) 878-1788
E-Mail: adp@adpengineering.com

PROJECT: **WMGX TOWER**
PORTLAND, ME
FOR PORTLAND RADIO GROUP

SHEET TITLE: **TOWER BASE AND ANCHOR LOCATIONS**

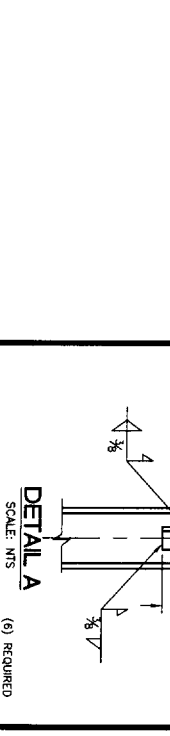
REVISIONS		
No.	BY	DATE
1	RCA	6/22/04
2	RCA	10/05/04
3	RCA	10/11/04
4		

DATE: 08-22-04
SCALE: 1" = 30'
DESIGN BY: ARLEDOE
DRAWN BY: BENNETT
PROJECT NUMBER: **04053**
SHEET NO: **101**



TOWER FOUNDATION

ANCHOR #3



REVISIONS			
No.	BY	DESCRIPTION	DATE
1	RCA	CLIENT REVIEW	6/22/04
2	RCA	PILE AND FOOTING REVISIONS CONCRETE NOTE REVISION	10/05/04
3	RCA	LONGITUDINAL REINFORCING	10/13/04

WMGX TOWER
PORTLAND, ME
 FOR: PORTLAND RADIO GROUP

SHEET TITLE:
TOWER BASE AND ANCHOR DETAILS

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ASSOCIATED DESIGN PARTNERS INC.

80 Leighton Road
 Falmouth, Maine 04105

Office: (207) 070-1751
 Fax: (207) 878-1788
 E-Mail: adp@adpengineering.com

DATE: 08-22-04
 SCALE: 3/8" = 1'-0" (N60)
 DESIGN BY: ARENGE
 DRAWN BY: BENNETT
 FILE # 04053-R3-C1X1.DWG
 PROJECT NUMBER:
04053
 SHEET NO:
102

GUY DATA CHART

GUY WIRE SIZE	ELEVATION	GUY END PLATE (A-572)	THIMBLE HD/ END FITTING	PREFORM	TURN-BUCKLE	TOWER SHACKLES	ANCHOR	PRIMARY INSULATOR	SECONDARY INSULATOR	GUY WIRE CUT LENGTH	NAT'L TENSN LBS 60°F
1" EHS	121.0'	10" X 5-3/4" X 1 1/4"	1"	1"	1-1/2"	1-1/4"	1-1/8"	-	-	10,450	10,450
5/8" EHS	241.0'	10" X 4-1/2" X 1"	5/8"	5/8"	1"	7/8"	3/4"	-	-	4,240	4,240
5/8" EHS	241.0'	10" X 4-1/2" X 1"	5/8"	5/8"	1"	7/8"	3/4"	-	-	4,240	4,240
7/8" EHS	361.0'	10" X 4-1/2" X 1"	7/8"	7/8"	1-1/2"	1"	1"	-	-	7,970	7,970
1" EHS	470.0'	10" X 5-3/4" X 1 1/4"	1"	1"	1-1/2"	1-1/4"	1-1/8"	-	-	10,450	10,450

* REFERENCE E-1A FOR ANCHOR RADIUS AND GUY WIRE CUT LENGTH DUE TO DROPS AND RISES IN SURFACE GRADE.

DESIGNED ANTENNA LOADING

ANTENNA TYPE	ELEVATION	LINE
(12) 5' X 1' PCS PANELS	140'	(12) 1-5/8"
(12) 5' X 1' PCS PANELS	160'	(12) 1-5/8"
(12) 5' X 1' PCS PANELS	180'	(12) 1-5/8"
4' GRID	235'	7/8"
4' GRID	260'	7/8"
DRC-C 4 BAY W/RADOMES	280.8'-319.2'	3"
4' X 6' ICE SHIELD	329.2'	-
4' GRID	330'	7/8"
6' GRID	420'	7/8"
(3) DB224 W/LONG ARM MOUNTS	440'	7/8"
SHPX-5AE W/RADOMES	480.6'-522.7'	3"
A-2/3 LIGHT KIT W/SPUR	-	-

MATERIAL LIST

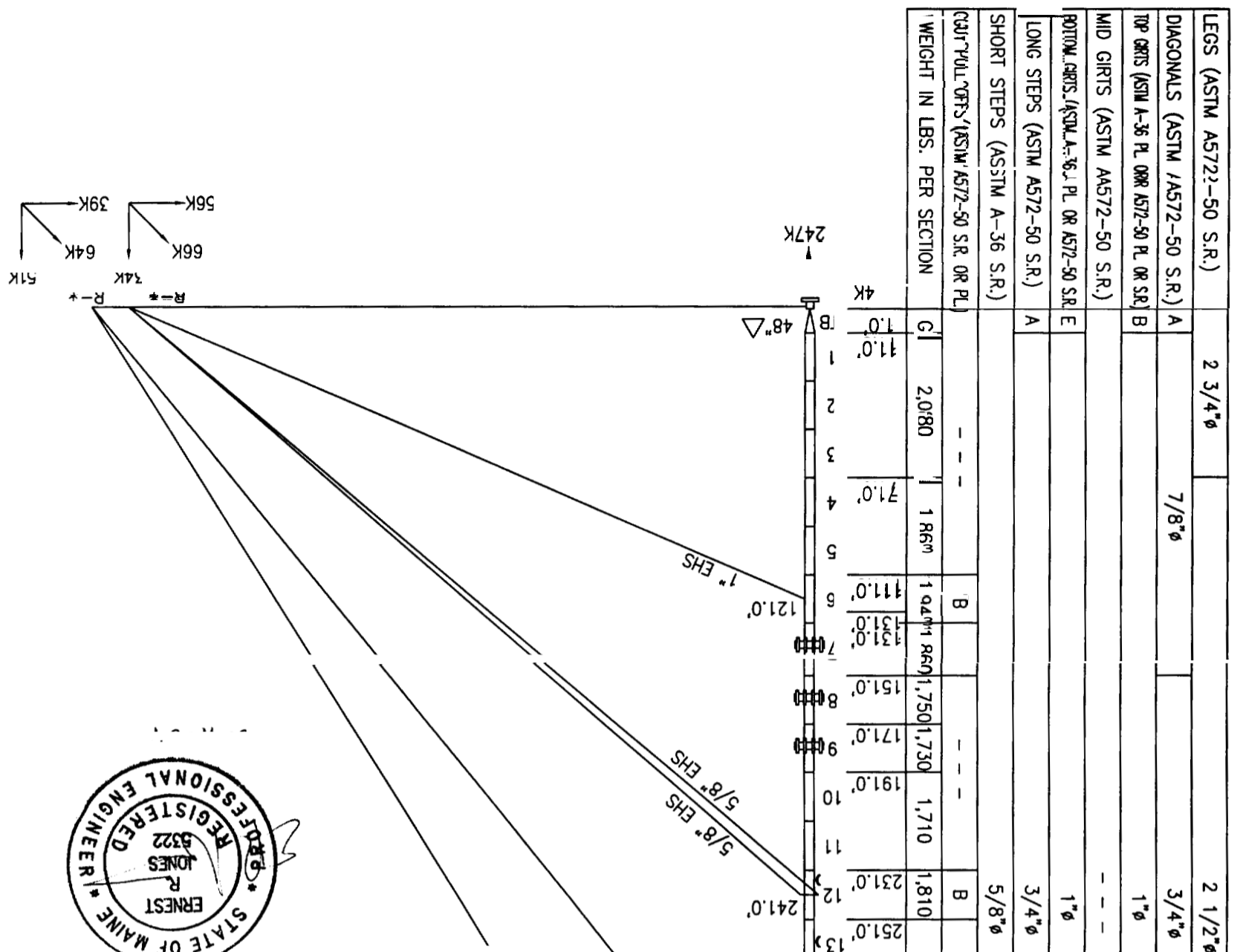
MARK	SIZE
A	1 1/8" S.R.
B	1 1/4" S.R.
C	1 1/2" PL.
D	7/8" S.R.
E	N/A
F	1 1/2" x 1/2"

WEIGHT LIST

MARK	WEIGHT
G	1,475 LBS.
H	3,100 LBS.
J	1,770 LBS.
K	1,005 LBS.

TOWER DESIGN NOTES

- TOWER DESIGNED FOR A 80 MPH (10 MPH W/ 1/2" TEE) BASIC WIND SPEED [FASTEST MILE] IN ACCORDANCE WITH THE TIA/EIA-222-F STANDARDS. THIS IS EQUIVALENT TO 100 MPH (80 MPH W/ 1/2" RADIAL TEE) [3 SECOND GUST] WIND SPEED PER TABLE 1609.3.1 OF THE 2003 INTERNATIONAL BUILDING CODE.
- WELD TOGETHER TRIANGULAR TOWER SECTIONS HAVE 8011E CONNECTIONS. CONNECTIONS USE GALVANIZED V-ZECS BOLTS, NUTS AND LOCKING DEVICES. INSTALLATION PER EIA-222-F.
- TOWER MEMBERS ARE "HOT DIPPED" GALVANIZED IN ACCORDANCE WITH ASTM A-123 AND A-153 STANDARDS.
- LEG STEEL IS ASTM A572 GRADE 50 OR EQUAL. ALL OTHER STEEL IS A-36 UNLESS OTHERWISE SPECIFIED.
- WELDS ARE FABRICATED WITH E8-T0S-6 ELECTRODES.
- LISTED WEIGHTS ARE ESTIMATES TO BE USED FOR INSTALLATION ERECTION PLANNING ONLY. IT SHALL BE THE RESPONSIBILITY OF THE ERECTOR TO VERIFY ALL SECTION WEIGHTS AT GROUND LEVEL PRIOR TO THE FINAL HOISTING OPERATION.

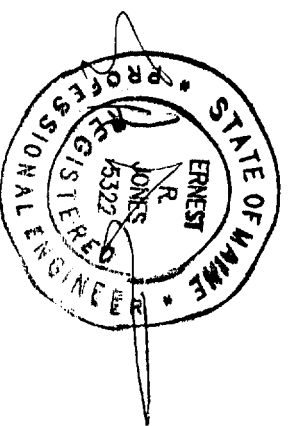
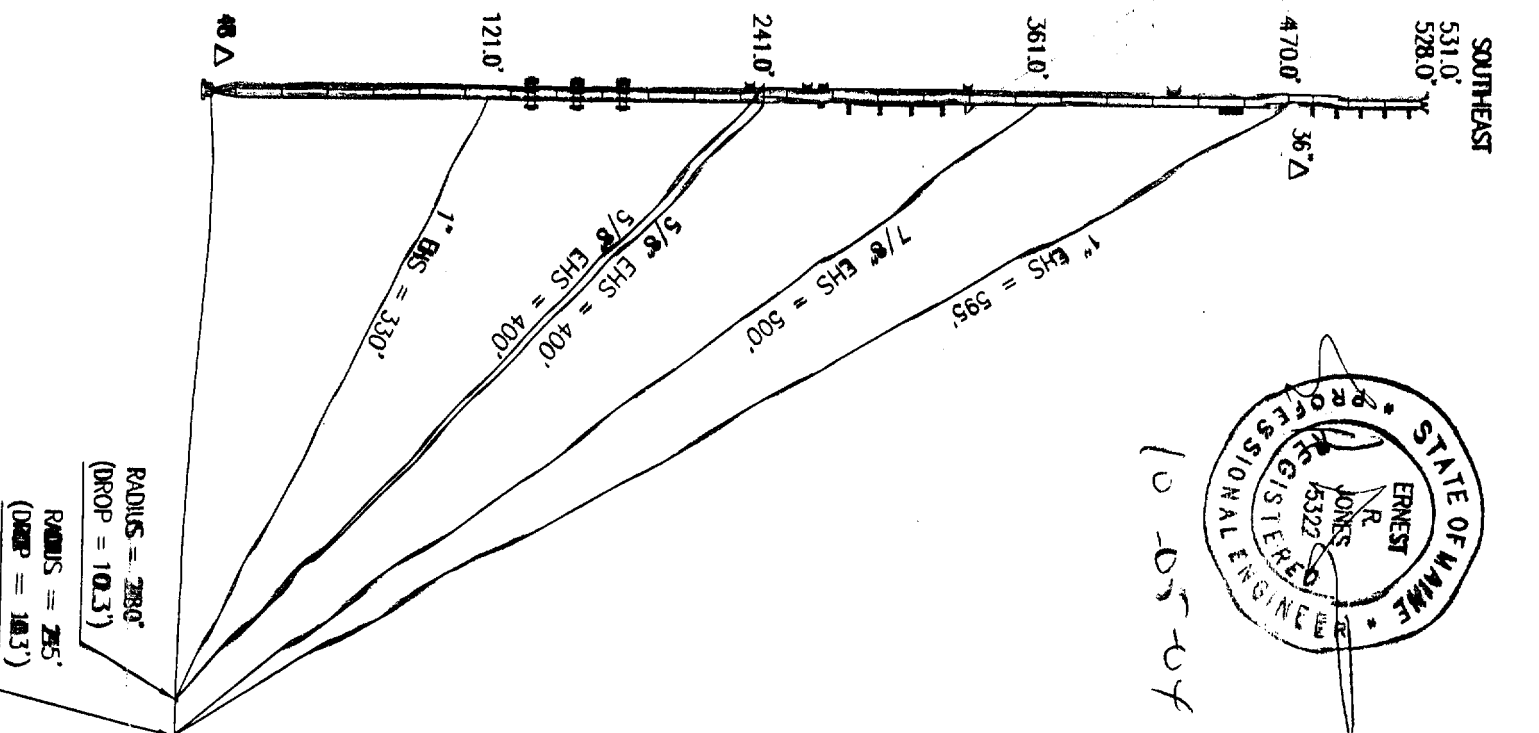
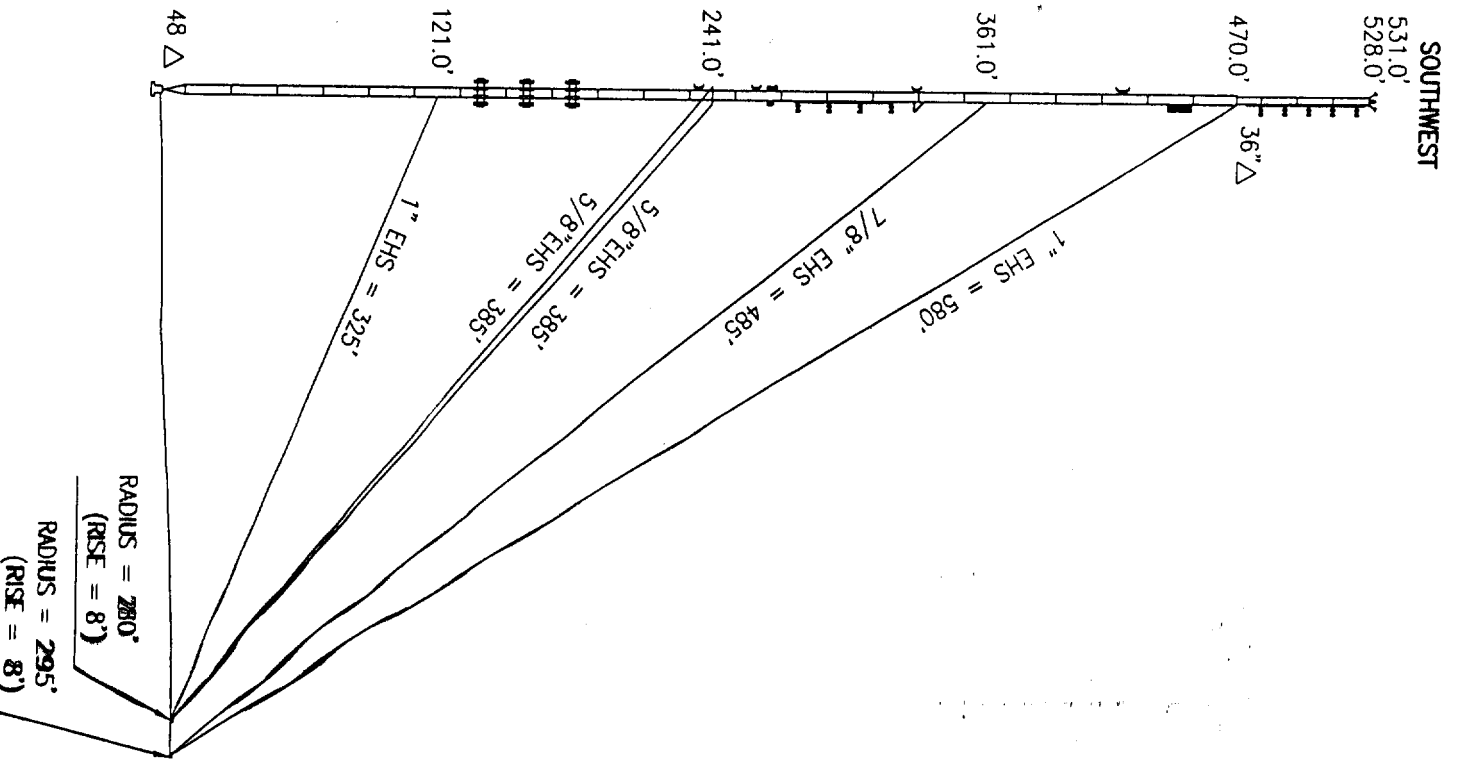
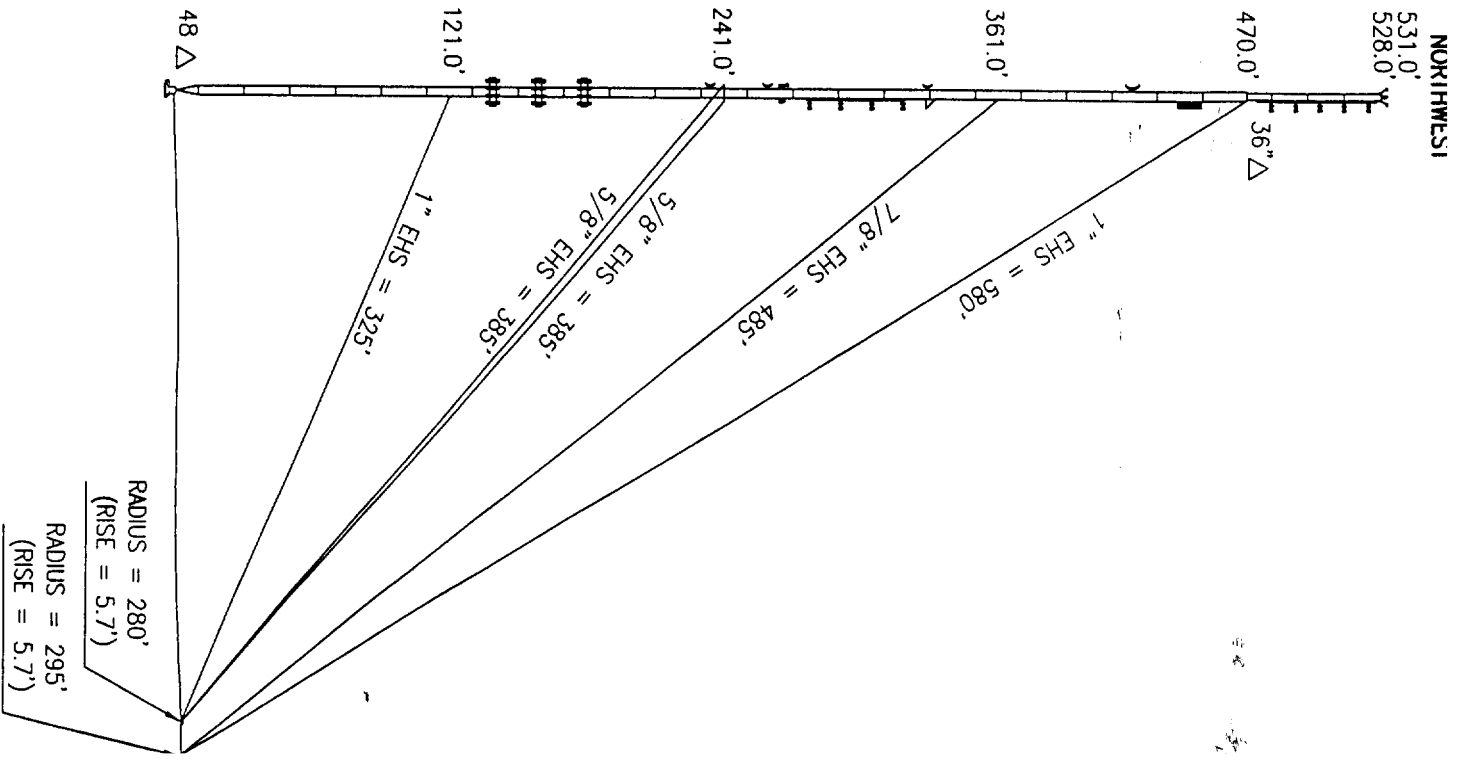


ELECTRONICS RESEARCH, INC.
 Established 1943
 7777 GARDNER RD.
 CHANDLER, IN 47610-9837
 PHONE: (812) 925-8000
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NO	REVISION	APP'D	DATE
1	ISSUED FOR CONSTRUCTION		10-12-04
2			
3			
4			
5			
6			

NAME: TOWER ELEVATION
 FOR: PORTLAND, ME
 DATE: 09/24/04
 DRAWING NO: E-1



10-05-04

ELECTRONICS RESEARCH, INC.
Established 1943
7777 GARDNER RD.
CHANDLER, IN 47610-9637
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NO.	REVISION	DATE	BY	CHECKED	APPROVED
1					
2					
3					
4					
5					

NAME: **ERI**

FOR: **PROJECTS**

DATE: **08/26/04**

SCALE: **AS SHOWN**

PROJECT NO: **12590**

DRAWING NO: **E-1A**

NAME: **ERI**

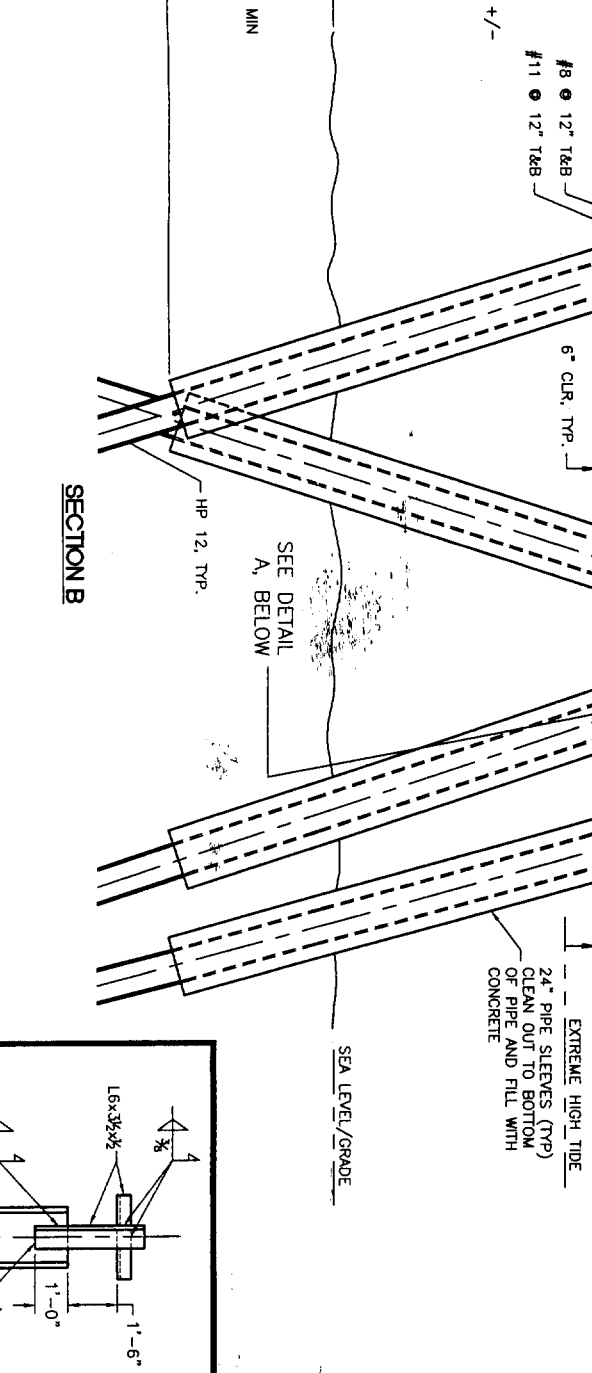
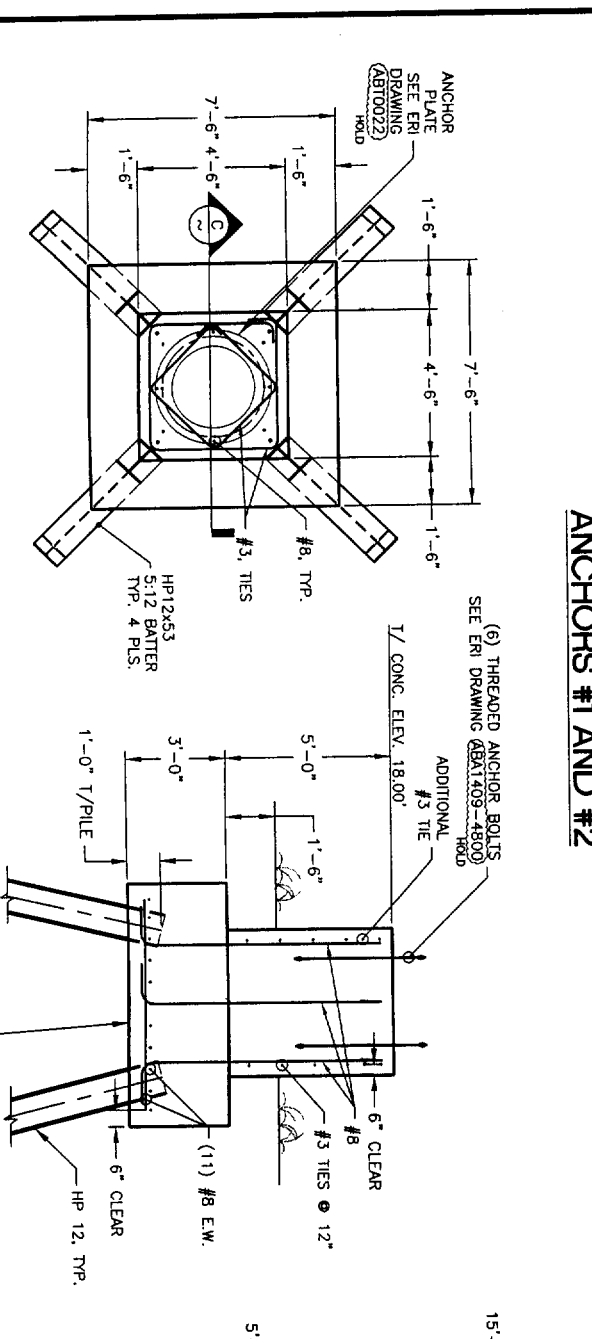
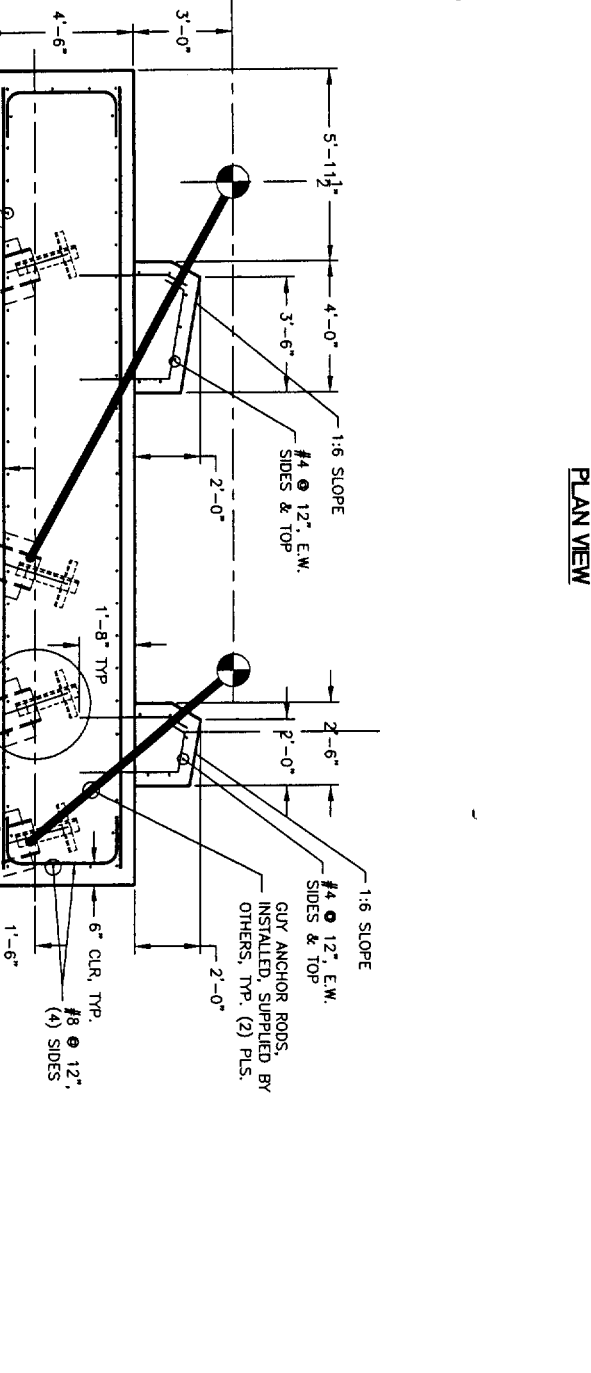
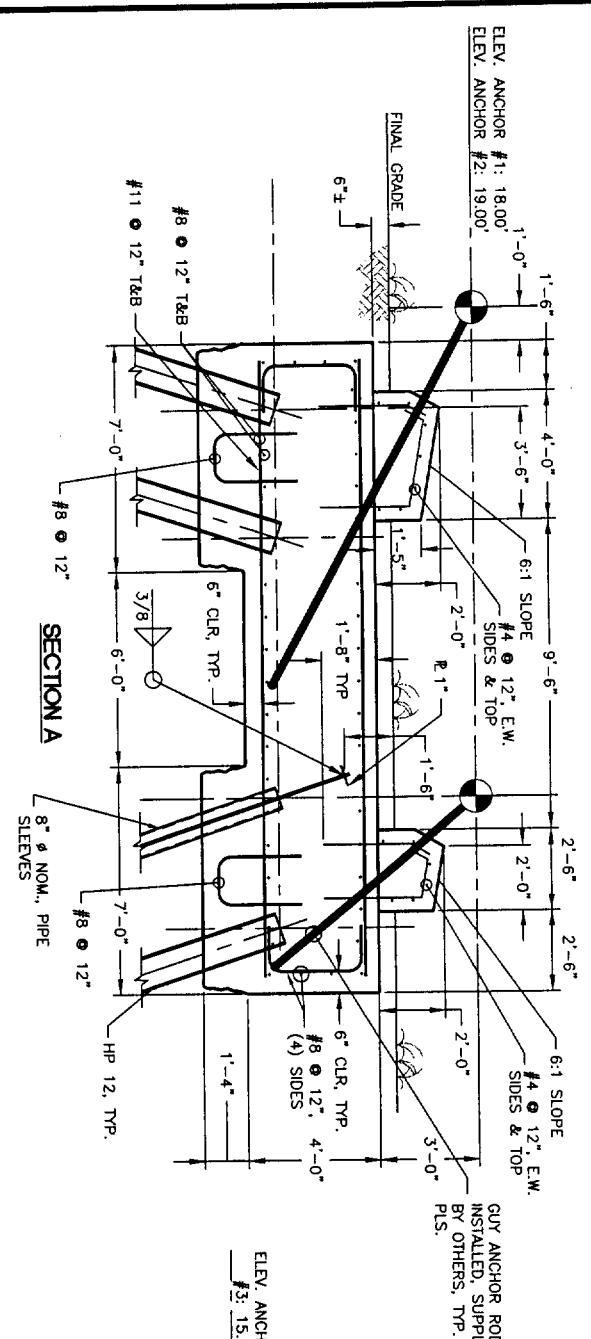
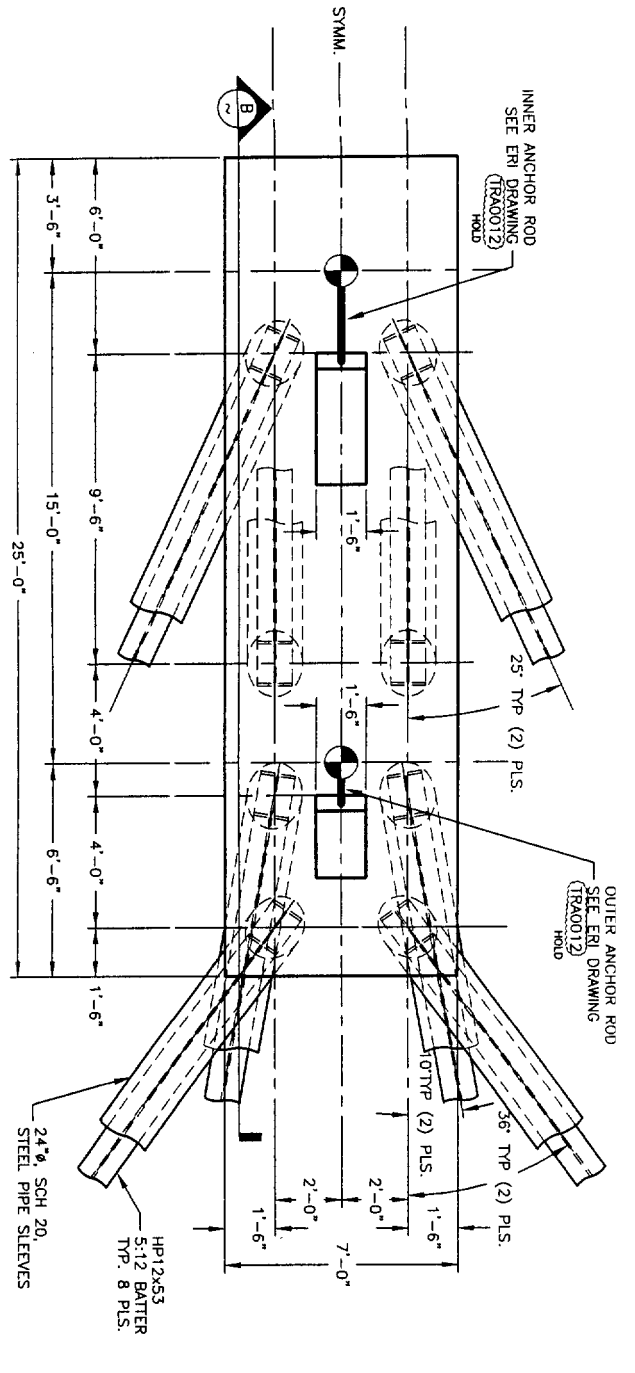
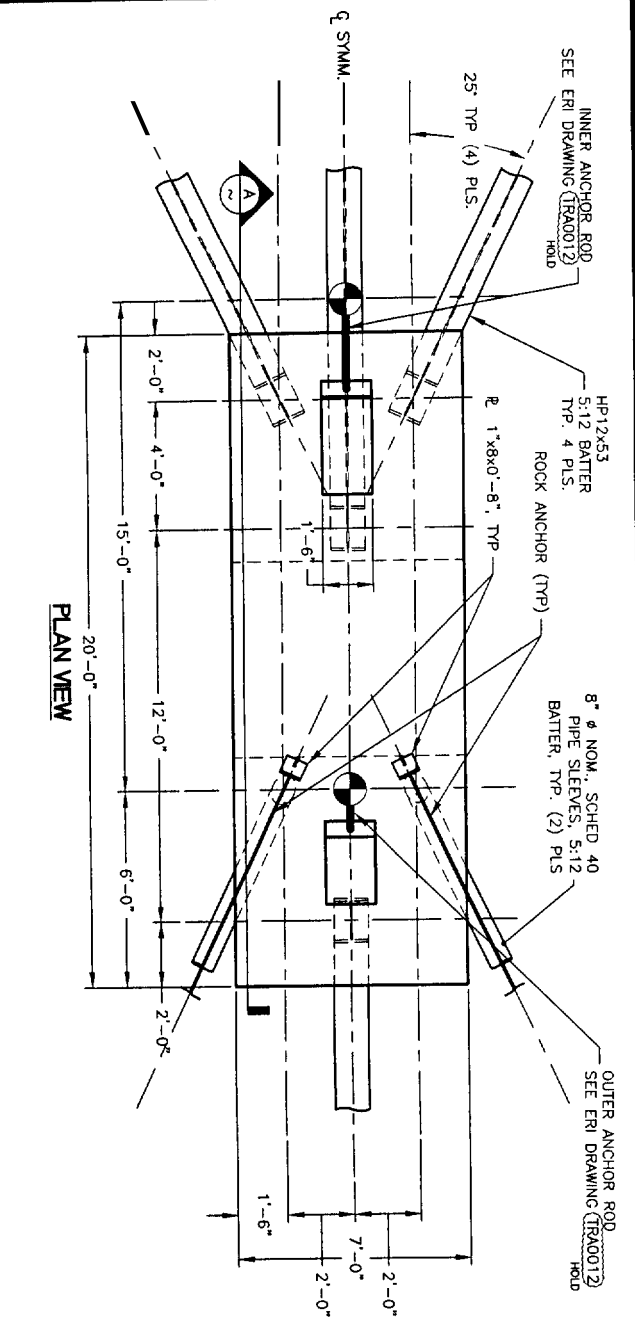
FOR: **PROJECTS**

DATE: **08/26/04**

SCALE: **AS SHOWN**

PROJECT NO: **12590**

DRAWING NO: **E-1A**



REVISIONS		
No.	BY	DESCRIPTION
1	RCA	CLIENT REVIEW
2	RCA	PILE AND FOOTING REVISIONS
3	RCA	CONCRETE NOTE REVISION
4	RCA	LONGITUDINAL REINFORCING

PROJECT: **WMGX TOWER**
PORTLAND, ME
 FOR: PORTLAND RADIO GROUP

SHEET TITLE:
TOWER BASE AND ANCHOR DETAILS

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ASSOCIATED DESIGN PARTNERS INC.

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 Falmouth, Maine 04105

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 Fax: (207) 878-1788
 E-Mail: adp@adpengineering.com

GUY DATA CHART

GUY WIRE SIZE	ELEVATION	GUY EAR PLATE (A-572)	THIMBLE HD/ END FITTING	PREFORM	TURN-BUCKLE	TOWER SHACKLES	ANCHOR	PRIMARY INSULATOR	SECONDARY INSULATOR	GUY WIRE CUT LGTH	MINI TENSION LBS	MAX TENSION LBS
1" EHS	121.0'	10" X 5-3/4" X 1 1/4"	1"	1"	1"	1-1/2"	1-1/4"	1-1/8"	---	---	---	10,450
5/8" EHS	241.0'	10" X 4-1/2" X 1"	5/8"	5/8"	5/8"	1"	7/8"	3/4"	---	---	---	4,240
5/8" EHS	241.0'	10" X 4-1/2" X 1"	5/8"	5/8"	5/8"	1"	7/8"	3/4"	---	---	---	4,240
7/8" EHS	361.0'	10" X 4-1/2" X 1"	7/8"	7/8"	7/8"	1-1/2"	1"	1"	---	---	---	7,970
1" EHS	470.0'	10" X 5-3/4" X 1 1/4"	1"	1"	1"	1-1/2"	1-1/4"	1-1/8"	---	---	---	10,450

REFERENCE E-1A FOR ANCHOR RADIUS AND GUY WIRE CUT *LENGTH DUE TO DROPS AND RISES IN SURFACE GRADE.

DESIGNED ANTENNA LOADING

ANTENNA TYPE	ELEVATION	LINE
(12) 5' X 1' PCS PANELS	140'	(12) 1-5/8"
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4" GRID	330'	7/8"
6' GRID	420'	7/8"
(3) DB224 W/LONG ARM MOUNTS	440'	7/8"
SHPX-5AE W/RADOMES	480.6'-522.7'	3"
A-2/3 LIGHT KIT W/SPUR	---	CONDUIT

TOWER DESIGN NOTES

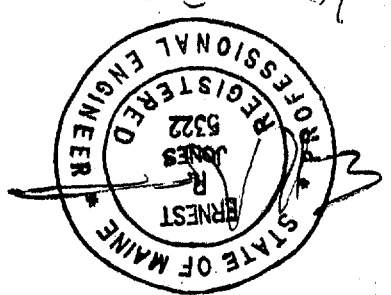
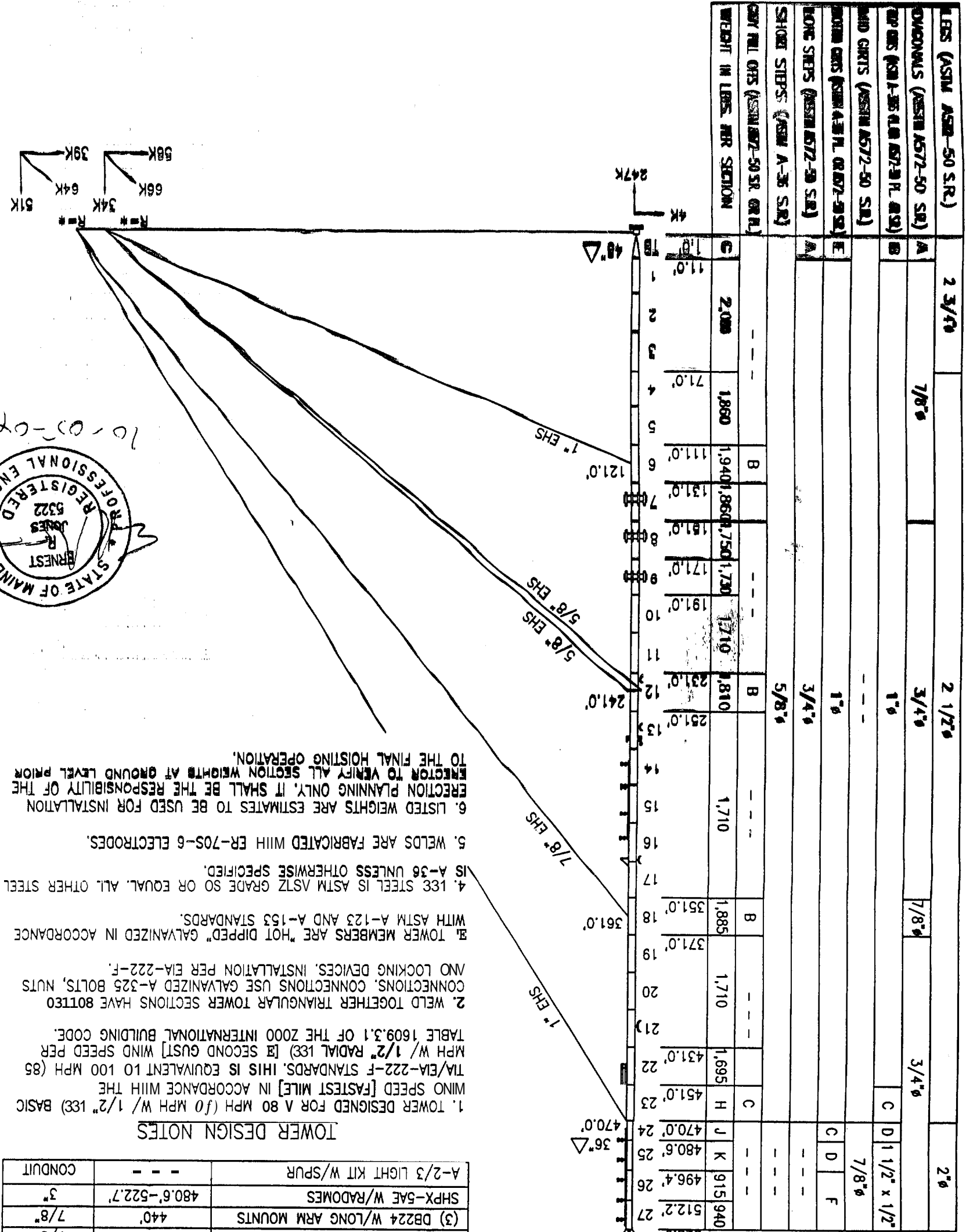
1. TOWER DESIGNED FOR A 80 MPH (f_0 MPH W/ 1/2" L33) BASIC WIND SPEED [FASTEST MILE] IN ACCORDANCE WITH THE TIA/EIA-222-F STANDARDS. THIS IS EQUIVALENT TO 100 MPH (85 MPH W/ 1/2" RADIAL L33) [SECOND GUST] WIND SPEED PER TABLE 1609.3.1 OF THE 2000 INTERNATIONAL BUILDING CODE.
2. WELD TOGETHER TRIANGULAR TOWER SECTIONS HAVE 80TT30 CONNECTIONS. CONNECTIONS USE GALVANIZED A-325 BOLTS, NUTS AND LOCKING DEVICES. INSTALLATION PER EIA-222-F.
3. TOWER MEMBERS ARE "HOT DIPPED" GALVANIZED IN ACCORDANCE WITH ASTM A-123 AND A-153 STANDARDS.
4. L33 STEEL IS ASTM A572 GRADE 50 OR EQUAL. ALL OTHER STEEL IS A-36 UNLESS OTHERWISE SPECIFIED.
5. WELDS ARE FABRICATED WITH ER-70S-6 ELECTRODES.
6. LISTED WEIGHTS ARE ESTIMATES TO BE USED FOR INSTALLATION ERECTION TO VERIFY ALL SECTION WEIGHTS AT GROUND LEVEL PRIOR TO THE FINAL HOISTING OPERATION.

WEIGHT LIST

MARK	WEIGHT
G	1,475 LBS.
H	3,100 LBS.
J	1,770 LBS.
K	1,005 LBS.

MATERIAL LIST

MARK	SIZE
A	1 1/8" S.R.
B	1 1/4" S.R.
C	12" X 1" PL.
D	7/8" S.R.
E	N/A
F	1 1/2" X 1/2"

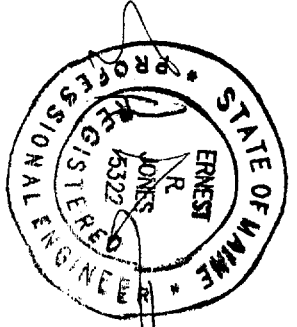
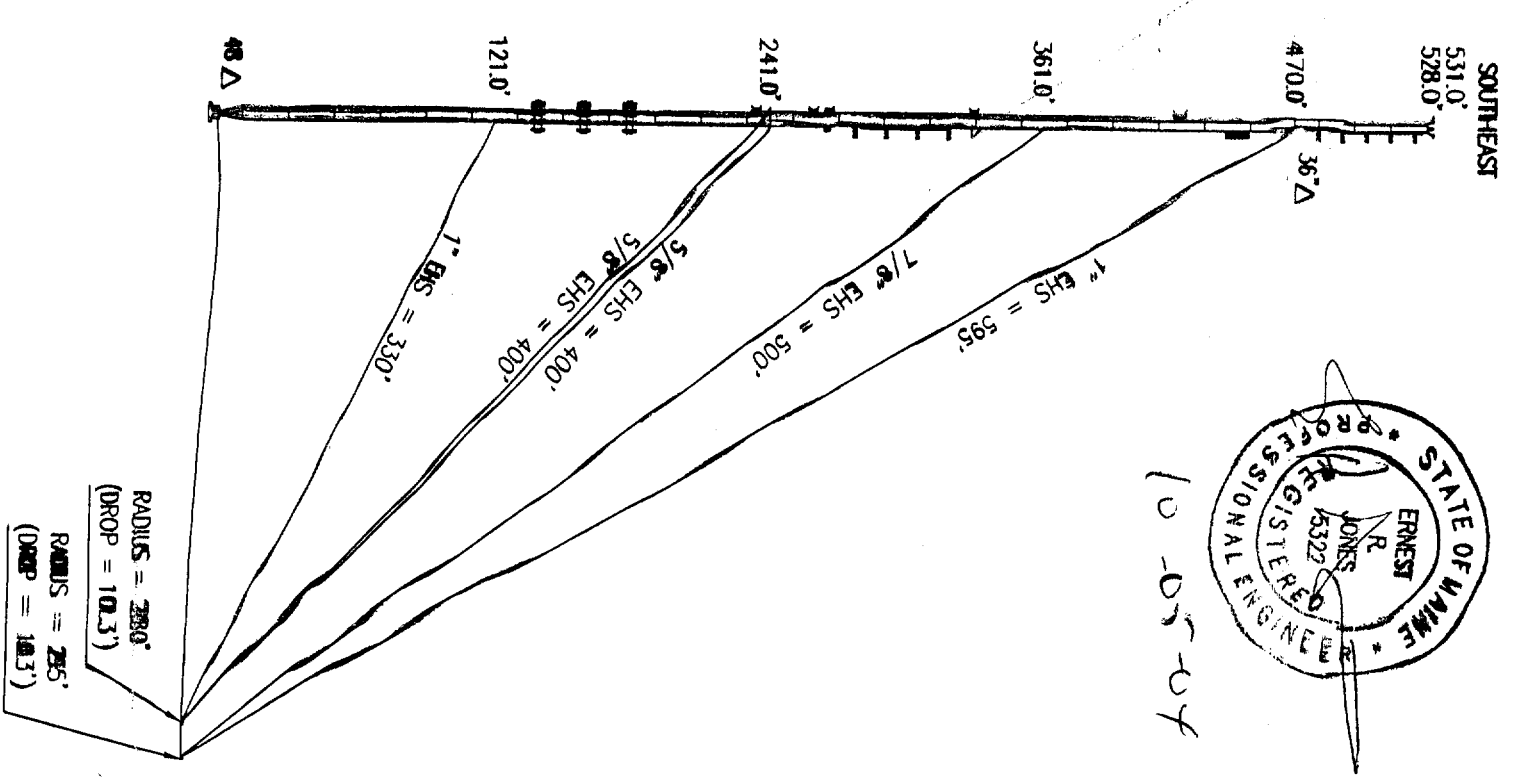
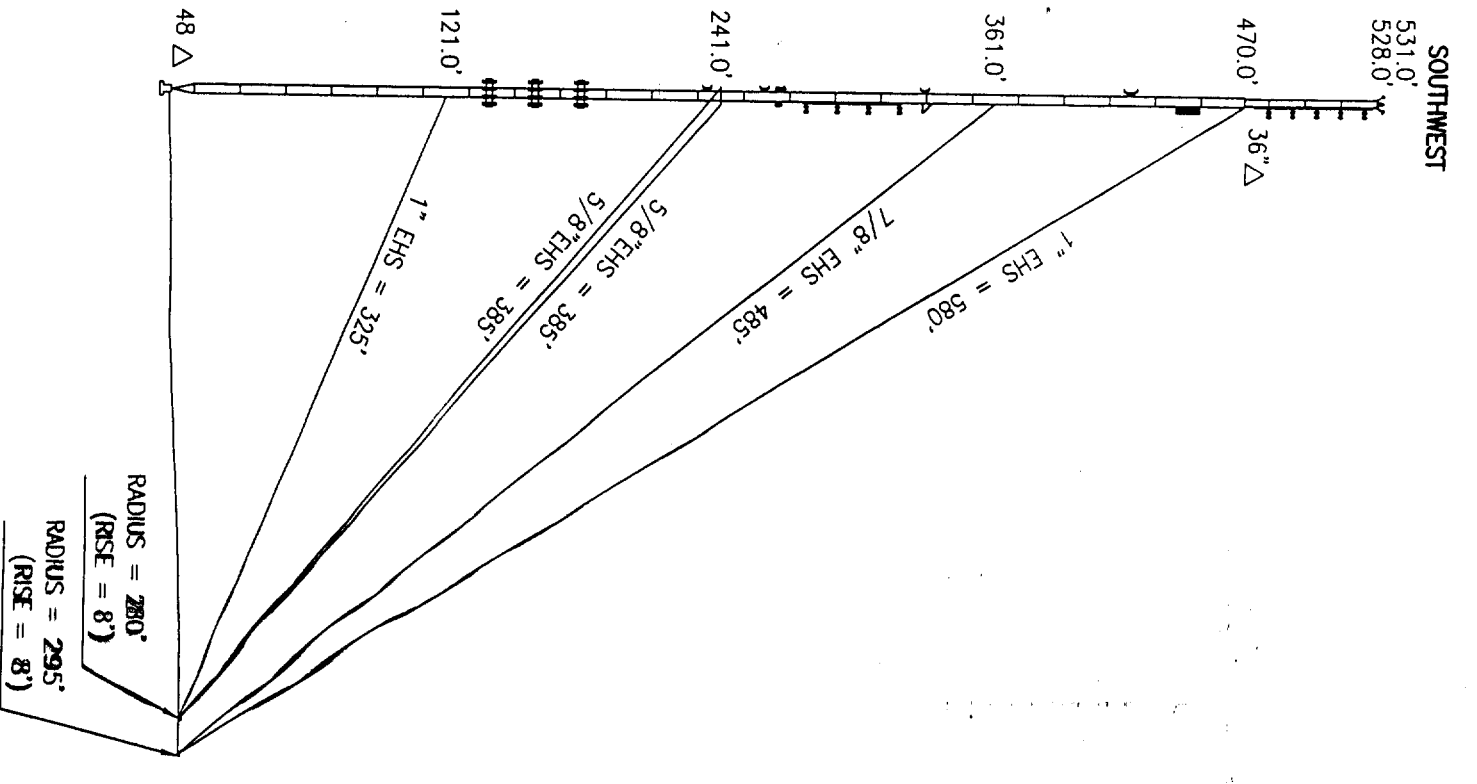
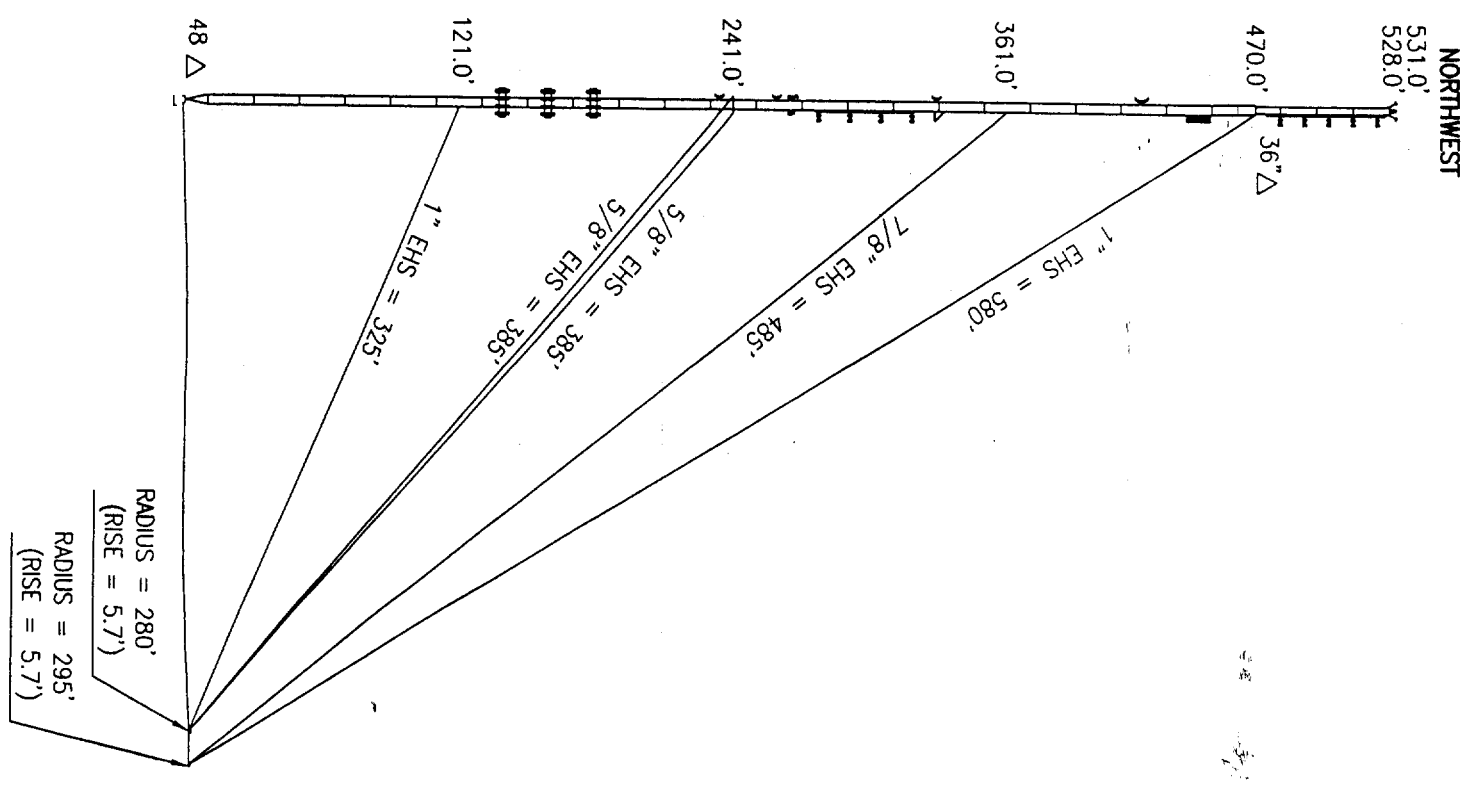


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 ELECTRONICS RESEARCH, INC.
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 7777 GARDNER RD.
 CHANDLER, IN 47610-9637
 PHONE: (812) 825-6000
 FAX: (812) 825-4026

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NO	REVISION	APP'D	DATE
1			
2			
3			
4			
5			
6			

NAME	TOWER ELEVATION	ROW NO.
PORTLAND, ME		2
DATE	1/7/00	DATE
1/20/04	DATE	1/20/04
DATE	06/24/04	DATE
DATE	06/24/04	DATE
DATE	06/24/04	DATE



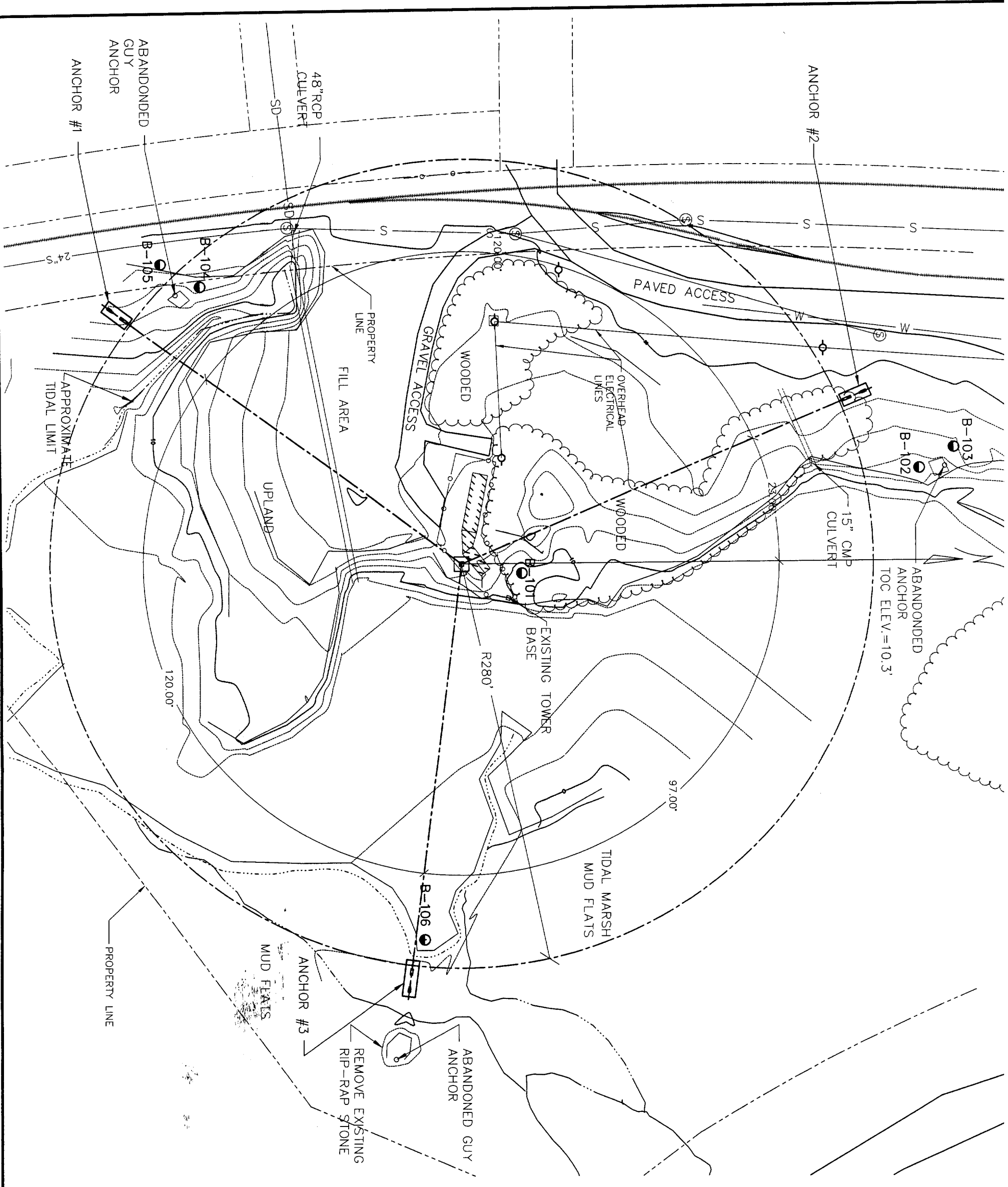
10-05-07

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NO	REVISION	DATE	BY	CHK'D	DATE	BY	CHK'D
1							
2							
3							
4							
5							

NAME: **COR WIRE ANTENNAS & CUT LENGTHS**
 FOR: **FOR WIRE**
 DATE: 08/29/04
 DRAWN BY: [Signature]
 CHECKED BY: [Signature]
 SCALE: [Blank]
 SHEET NO. 2
 TOTAL SHEETS 2
 PROJECT NO. 12590
 DRAWING NO. E-1A



- CONCRETE**
1. ALL CONCRETE WORK AND MATERIAL SHALL CONFORM TO ALL ALLIANCE BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND ACI 301-99 SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS.
 2. CONCRETE COMPRESSIVE STRENGTH SHALL BE A MINIMUM OF 4000 PSI AT 28 DAYS AND A MAXIMUM WATER/CEMENT RATIO OF 0.45.
 3. CONCRETE IN ANCHOR #3 SHALL HAVE 3 GALLONS PER CUBIC YARD OF DCS CORROSION INHIBITOR BY W. R. GRACE, ADDED IN ACCORDANCE WITH THE MANUFACTURER'S SUGGESTED PRACTICES. ALL OTHER CONCRETE SHALL HAVE 2 GALLONS PER CUBIC YARD OF DCS.
 4. ENTRAINED AIR IN THE CONCRETE SHALL BE 6% ± 1%.
 5. REINFORCING STEEL SHALL BE GRADE 60, DEFORMED BARS CONFORMING TO ASTM A-615.
 6. CONTRACTOR TO SUBMIT MILL CERTIFICATE FOR REINFORCING STEEL AND DESIGN MIX FOR CONCRETE SEVEN DAYS PRIOR TO CONSTRUCTION.

PILES

1. PILES SHALL BE HP12x33 WITH A MINIMUM OF 10' OF PILE DRIVEN BELOW GRADE AND DELIVERING A MINIMUM OF 25,000 FT LBS OF ENERGY PER BLOW. A FINAL PENETRATION RESISTANCE EQUAL TO 10 BLOWS PER INCH FOR THE FINAL 6 INCHES OF DRIVING IS REQUIRED. IF ABRUPT REFUSALS ARE ENCOUNTERED, DRIVING MAY BE INTERRUPTED UNTIL THE PENETRATION IS LESS THAN 1/2" FOR TEN SUCCESSIVE BLOWS.
4. AT ANCHOR #1, DRIVE 24" DIA., SCH. 20 PIPE CONCENTRIC WITH PILES, TO 5'-0" BELOW MUD LINE, CLEAN SOIL FROM INSIDE PIPE AND FILL WITH CONCRETE.
5. ONE PILE SHOULD BE LOAD TESTED TO 300 KIPS IN LIEU OF A PILE LOAD TEST. THE CONTRACTOR MAY MONITOR THE INSTALLATION OF THREE PRODUCTION PILES AT SEPARATE LOCATIONS USING CASE-COUBLE PILE DRIVING ANALYZER EQUIPMENT TO VERIFY THAT THE PILES ACQUIRE 300 KIP CAPACITY. MONITORING WITH PILE DRIVING ANALYZER EQUIPMENT IS REQUIRED. APPROVAL OF THE LOCAL BUILDING OFFICIAL.
6. WHERE INDICATED ON THE DRAWING, ROCK ANCHORS SHALL BE INSTALLED INSIDE THE WEB OF THE PILES TO RESIST UPLIFT. ANCHORS SHALL BE 3/8" DIAMETER UPSET THEADED BARS WITH 3/8" DIAMETER WELDED WELLS OR 1/2" TYPE II, GRADE 150 KSI.
7. ROCK ANCHORS SHALL BE SHALL HAVE A MINIMUM BOND LENGTH INTO BEDROCK OF 76 FEET; THE HOLE SHOULD BE OVER-BORED AT LEAST 6" THE HOLE INTO BEDROCK SHALL BE AT LEAST 1/2" DIAMETER CLEAR WITH AN ALLOWABLE TOLERANCE OF ± 1/8" TO PROVIDE A ROUGH SURFACE.
8. ROCK ANCHORS SHALL BE GROUTED INTO THE BEDROCK WITH EITHER PORTLAND CEMENT GROUT OR EPOXY RESIN CEMENT GROUT SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 8000 PSI. GROUT MUST BE TAMPED OR TAMPED INTO THE HOLE.
9. ROCK ANCHORS SHALL BE PROOF TESTED TO 189 KIPS (150% OF DESIGN CAPACITY) AND LOCKED OFF AT 71 KIPS (90% OF DESIGN CAPACITY).
10. THE TOP 15 FEET OF 4" DIAMETER PIPE SLEEVES AND THE ENTIRE LENGTH OF 24" DIAMETER PIPE SLEEVES, WITH CARBOLINE BITUMASTIC 300A, COAL TAR EPOXY, OR EQUAL, APPROVED IN WRITING BY THE ENGINEER, COATING SHALL BE A MINIMUM OF 20 MILS. DRY FILM THICKNESS.

- SURFACE PREPARATION FOR COATING:** FIRST REMOVE VISIBLE OIL, GREASE, AND DRAMING AND CUTTING COMPOUNDS BY SOLVENT CLEANING PER SSPC SP 1. THEN, COMPLETE SURFACE PREPARATION BY NEAR WHITE BLAST CLEANING. REMOVE RESIDUAL DUST FROM BLASTED SURFACE BY BLOWING WITH DRY, DIAPHRAGM VACUUMING, OR SVEPERS. MILL THICKNESS PER SSPC SP 10.
- DESIGN LOADS**
- TOWER BASE DESIGN BASED ON LOADING INFORMATION PROVIDED BY ELECTRONICS RESEARCH, INC. (E-MAIL: 77@COMENR.COM, PHONE: 603-888-1111). LOADS OPERATED UTILIZING IBC DESIGN CRITERIA.

ASSOCIATED DESIGN PARTNERS INC.

80 Leighton Road Falmouth, Maine 04105

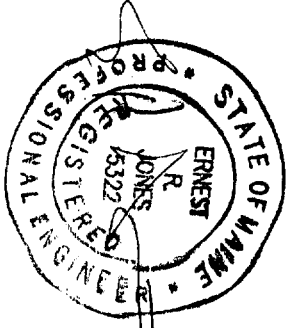
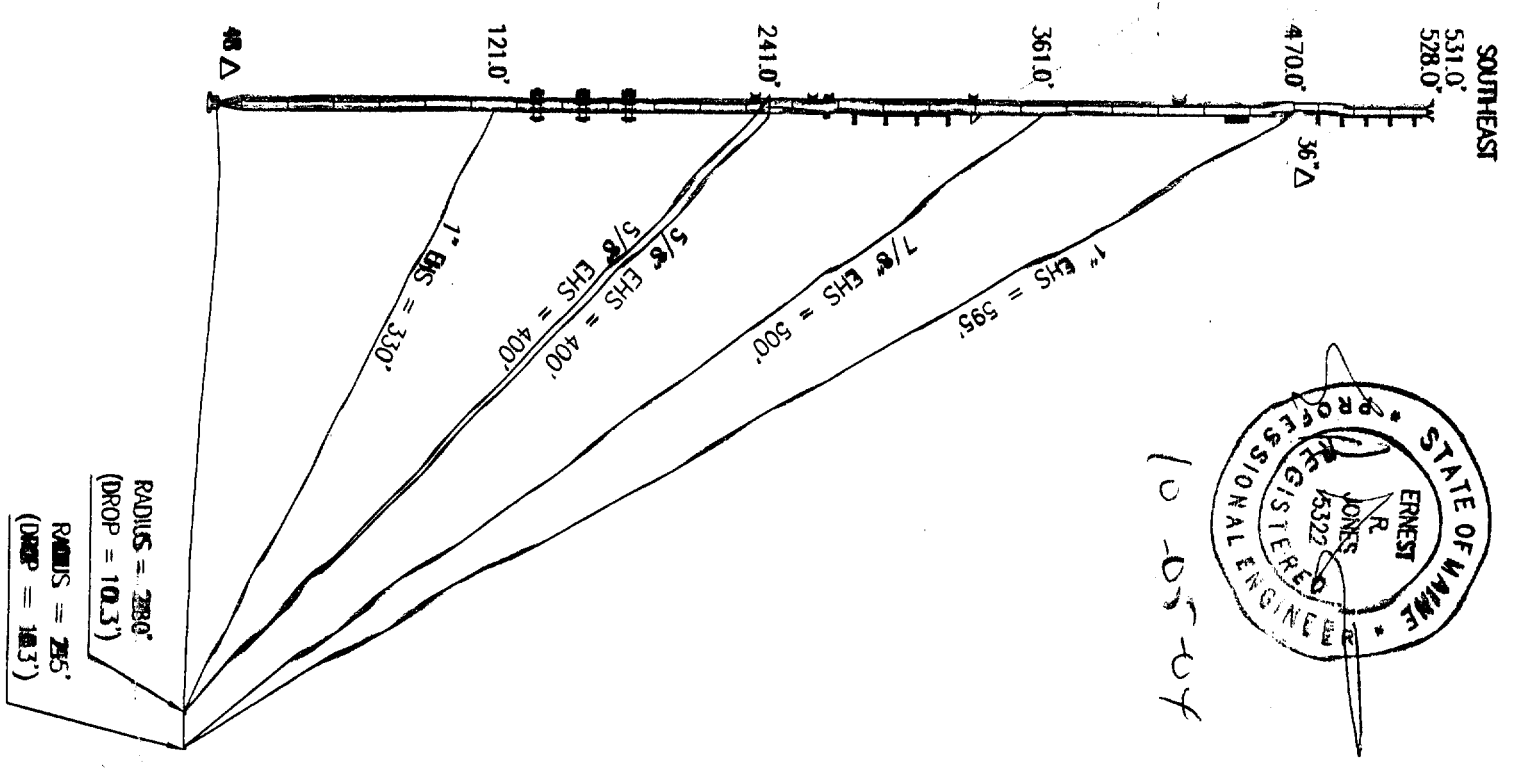
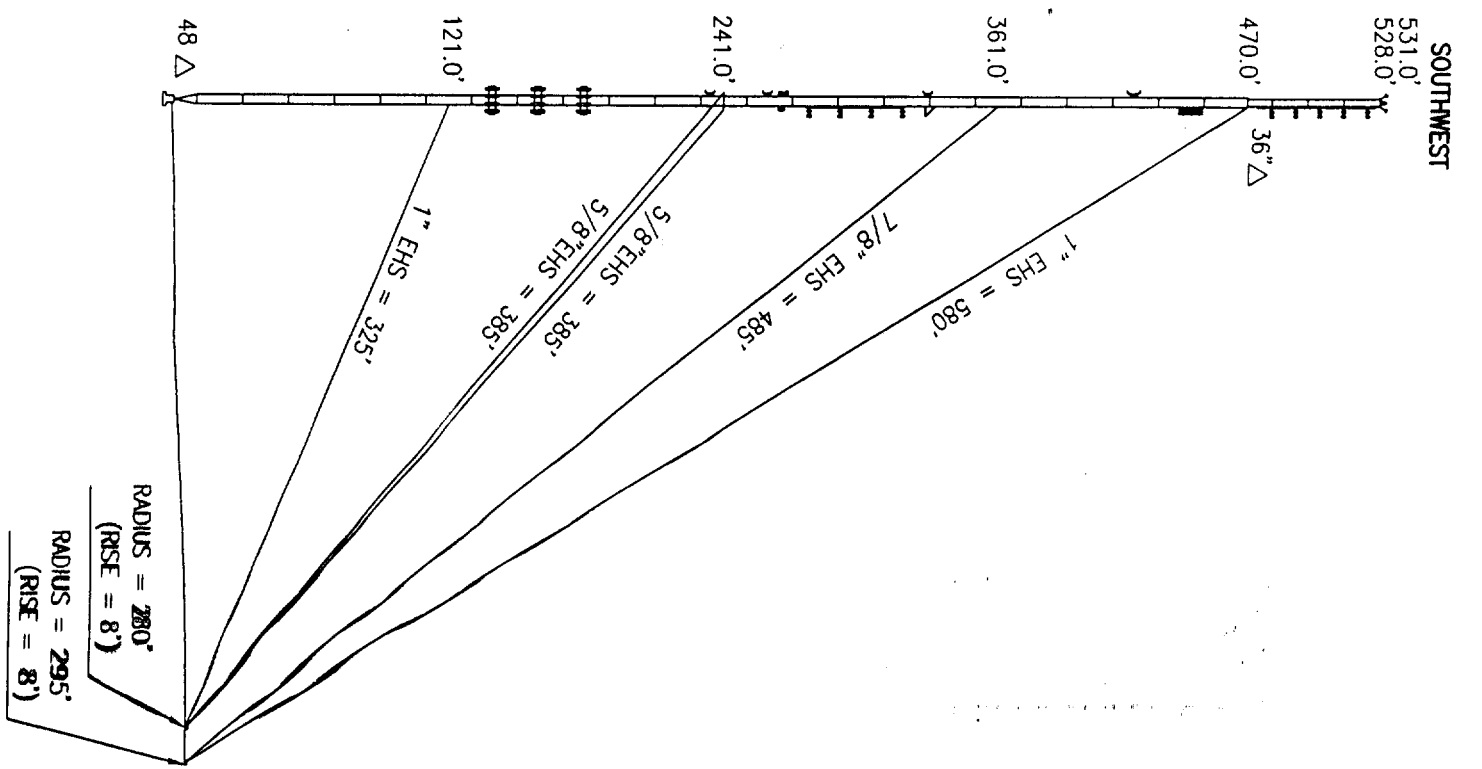
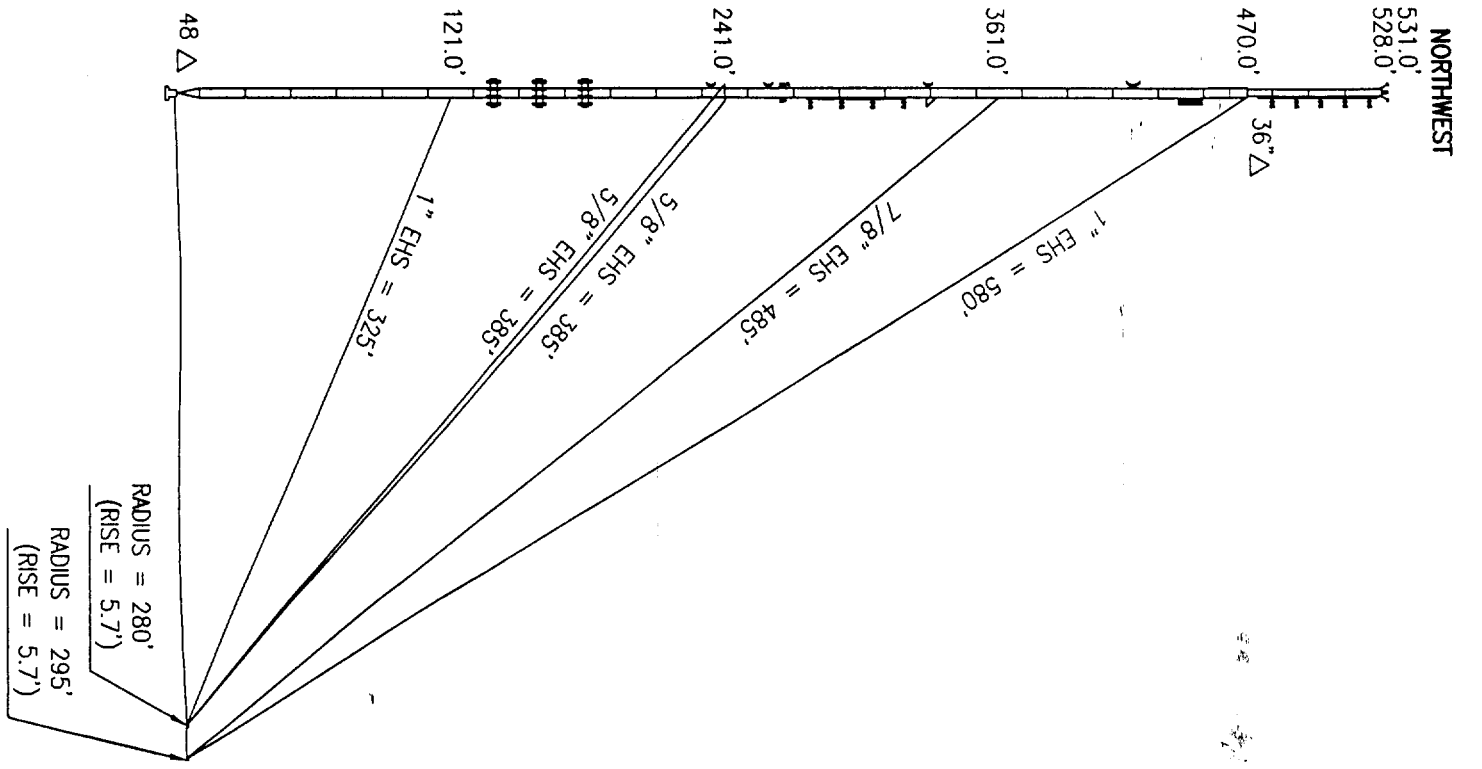
Office: (207) 878-1751
 Fax: (207) 878-1788
 E-Mail: adp@dpengineering.com

PROJECT: WMGX TOWER PORTLAND, ME FOR: PORTLAND RADIO GROUP

SHEET TITLE: TOWER BASE AND ANCHOR LOCATIONS

REVISIONS		
No.	BY	DESCRIPTION
1	RCA	CLIENT REVIEW
2	RCA	PILE AND FOOTING REVISIONS & CONCRETE NOTE REVISION
3	RCA	PILE NOTE #9

DATE: 06-22-04
 SCALE: 1" = 30'
 DESIGN BY: ARLEDOE
 DRAWN BY: BENNETT
 FILE #: 04053-PR-03-C10XDMG
 PROJECT NUMBER: 04053
 SHEET NO: 101



10-05-04

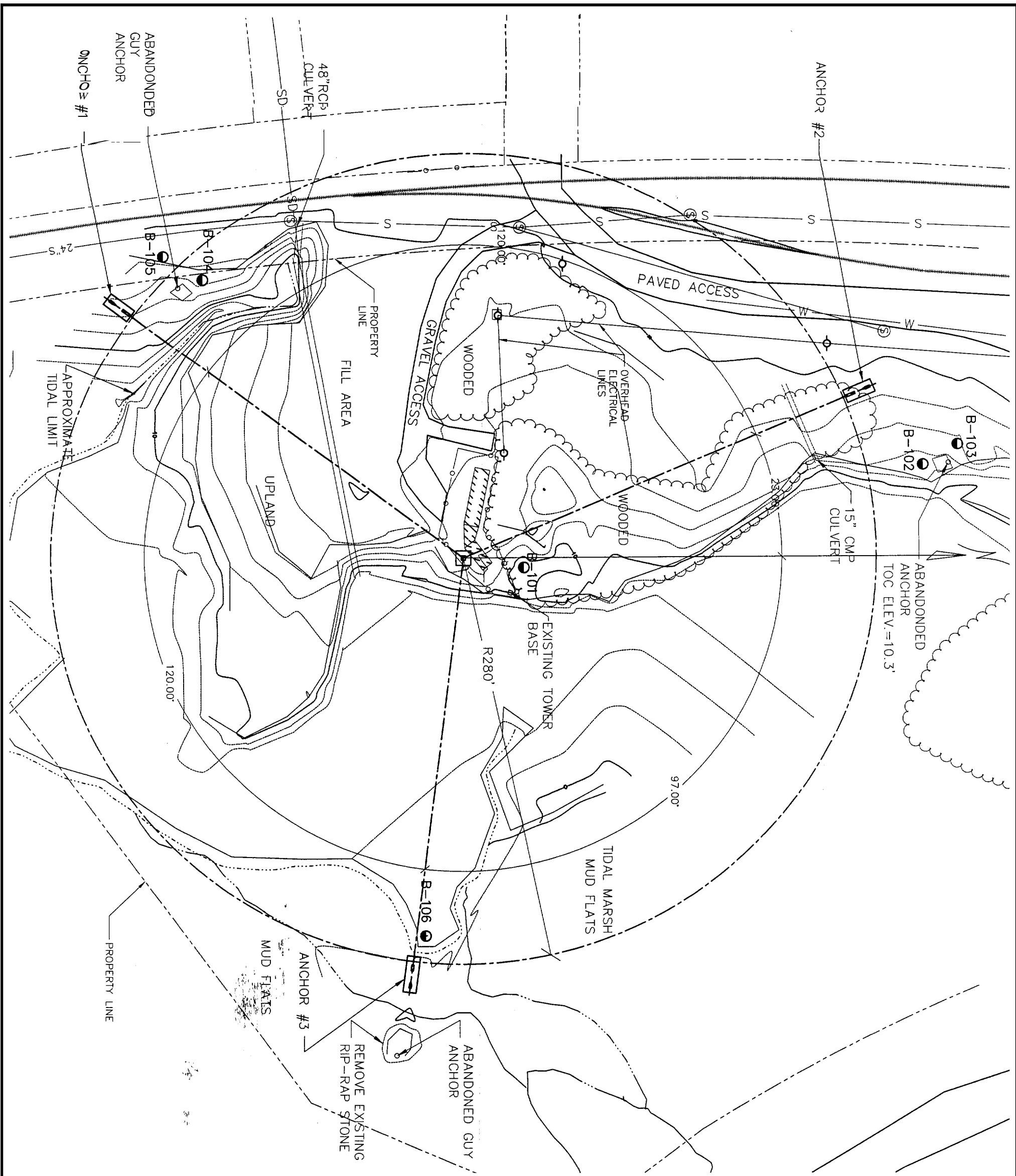
ELECTRONICS RESEARCH, INC.
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 FAX: (812) 925-4026



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NO	REVISION	DATE	BY	CHK'D	DATE	NAME	JOB
1							
2							
3							
4							
5							

NAME: **CONCRETE REINFORCEMENT & CUT LENGTHS**
 JOB NO: **12590E-1A**
 DATE: **10/05/04**
 DRAWN BY: **ERI**
 CHECKED BY: **ERI**
 SCALE: **AS SHOWN**
 SHEET NO: **E-1A**



1. ALL CONCRETE WORK AND MATERIAL SHALL BE IN ACCORDANCE WITH THE BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND ACI 301-99 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS".
2. CONCRETE COMPRESSIVE STRENGTH SHALL BE A MINIMUM OF 4,000 PSI AT 28 DAYS AND A MAXIMUM WATER/CEMENT RATIO OF 0.45.
3. CONCRETE IN ANCHOR #1 SHALL HAVE 3 GALLONS PER CUBIC YARD OF D.C.I.'S CORROSION INHIBITOR BY W.R. GRACE, ADDED IN ACCORDANCE WITH THE MANUFACTURER'S SUGGESTED PRACTICES. ALL OTHER CONCRETE SHALL HAVE 2 GALLONS PER CUBIC YARD OF D.C.I.'S.
4. ENTRAINED AIR IN THE CONCRETE SHALL BE 6% ± 1%.
5. REINFORCING STEEL SHALL BE GRADE 60, DEFORMED BARS CONFORMING TO ASTM A-615.
6. CONTRACTOR TO SUBMIT MILL GERMINATION FOR REINFORCING STEEL AND SHALL PROVIDE CONCRETE SEVEN DAYS PRIOR TO CONSTRUCTION.

PILES

1. PILES SHALL BE HP12x33 WITH A MINIMUM YIELD STRESS OF 50 KSI, AND SHALL CONFORM TO ASTM A 572 GRADE 50, A 52 GRADE 50, OR A 588 GRADE 50.
2. PILES SHALL BE FITTED WITH DRIVING POINTS.
3. PILES SHALL BE DRIVEN TO BEARING IN CLAY AND SILT OR BEDROCK WITH A HAMMER DRIVING METHOD. THE MINIMUM PENETRATION RESISTANCE PER BLOW, A FINAL PENETRATION RESISTANCE EQUAL TO 10 BLOWS PER INCH FOR THE FINAL 6 INCHES OF DRIVING IS REQUIRED. IF ABRUPT REFUSALS ARE ENCOUNTERED, DRIVING MAY BE RESUMED WHEN THE PENETRATION IS LESS THAN 5' FOR TEN SUCCESSIVE BLOWS.
4. AT ANCHOR #1, DRIVE 24" DIA., SCH. 20 PIPE CONCENTRIC WITH PILES, TO 5'-0" BELOW AND FILL WITH CONCRETE.
5. ONE PILE SHOULD BE LOAD TESTED TO 300 KIPS. THE TEST SHOULD BE PERFORMED BY THE CONTRACTOR OR THREE PRODUCTION PILES AT SEPARATE LOCATIONS USING CASE-COUBLE PILE DRIVING ANALYZER EQUIPMENT TO VERIFY THAT THE PILES ACHIEVE 300 KIP CAPACITY. MONITORING WITH PILE DRIVING ANALYZER IN LEU OF LOAD TEST WILL BE ACCEPTED FOR APPROVAL OF THE LOCAL BUILDING OFFICIAL.

6. WHERE INDICATED ON THE DRAWING, ROCK ANCHORS SHALL BE INSTALLED INSIDE THE WEB OF THE PILES TO RESIST UPLIFT. ANCHORS SHALL BE 1 3/8" DIAMETER UPSET THREADED STEEL BARS CONFORMING TO ASTM A772, TYPE II, GRADE 105 KSI.
 7. ROCK ANCHORS SHALL BE SHALL HAVE A MINIMUM BOND LENGTH INTO BEDROCK OF 25 FEET. THE HOLE SHOULD BE OVER-SHOCKED AT LEAST 6" THE HOLE INTO BEDROCK SHALL BE AT LEAST 4" DIAMETER MADE WITH AIR PROVISION DRILLING AND ROCKERS TO PROVIDE A ROUGH SURFACE.
 8. ROCK ANCHORS SHALL BE GROUTED INTO THE BEDROCK WITH EITHER PORTLAND CEMENT GROUT OR EPOXY RESIN. CEMENT GROUT SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 6,000 EPOXY CONCRETE SHALL BE TRENCHED OR FORCED INTO THE HOLE.
 9. ROCK ANCHORS SHALL BE PROOF TESTED TO 189 KIPS (15% OF DESIGN CAPACITY) AND LOCKED OFF AT 71 KIPS (5% OF DESIGN CAPACITY).
 10. THE TOP 14 FEET OF 4" DIAMETER PIPE SLEEVES AND THE LOWER PORTION OF 2" DIAMETER PIPE SLEEVES, WITH CARBON LINE BITUMASTIC 300AL, COAL TAR EPOXY OR EQUAL, APPROVED IN WRITING BY THE ENGINEER, COATING SHALL BE A MINIMUM OF 20 MILS. DRY FILM THICKNESS.
- SURFACE PREPARATION FOR COATING: FIRST REMOVE VISIBLE OIL, GREASE, AND DIRT BY WIRE BRUSHING AND CLEANING WITH SOLVENT AND CUTTING COMPANIONS BY SOLVENT CLEANING PER SSPC SP 1. THEN, COMPLETE SURFACE PREPARATION BY NEAR-WHITE BLAST CLEANING. REMOVE RESIDUAL DUST FROM BLASTED SURFACE BY BLOWING WITH DRY, OIL-FREE AIR, VACUUMING, OR SWEEPING. MILL FODDER SURFACE TO 1/16" OF AT LEAST 2 MIL THICKNESS PER SSPC SP 10.

DESIGN LOADS

TOWER BASE DESIGN BASED ON LOADING INFORMATION PROVIDED BY ELECTRONICS RESEARCH, INC. (E.R.I.) 777 GARDNER RD. THUNDERBOLT, MAINE 04468. LOADS GENERATED UTILIZING IBC DESIGN CRITERIA.

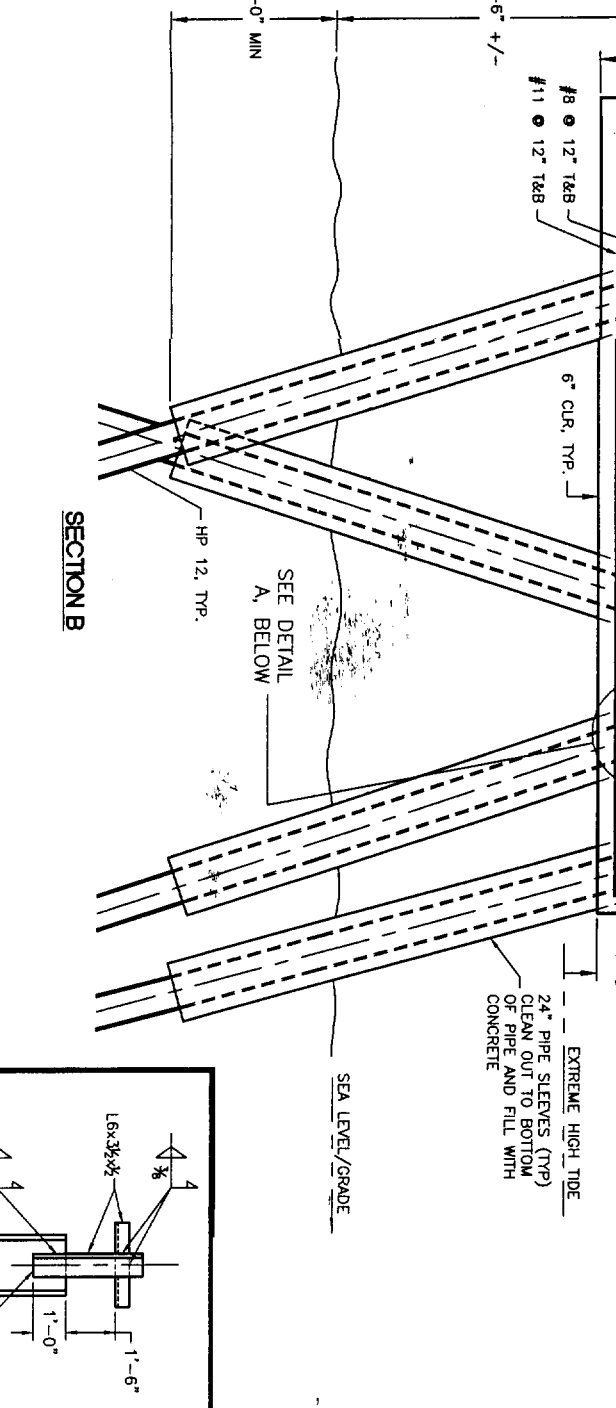
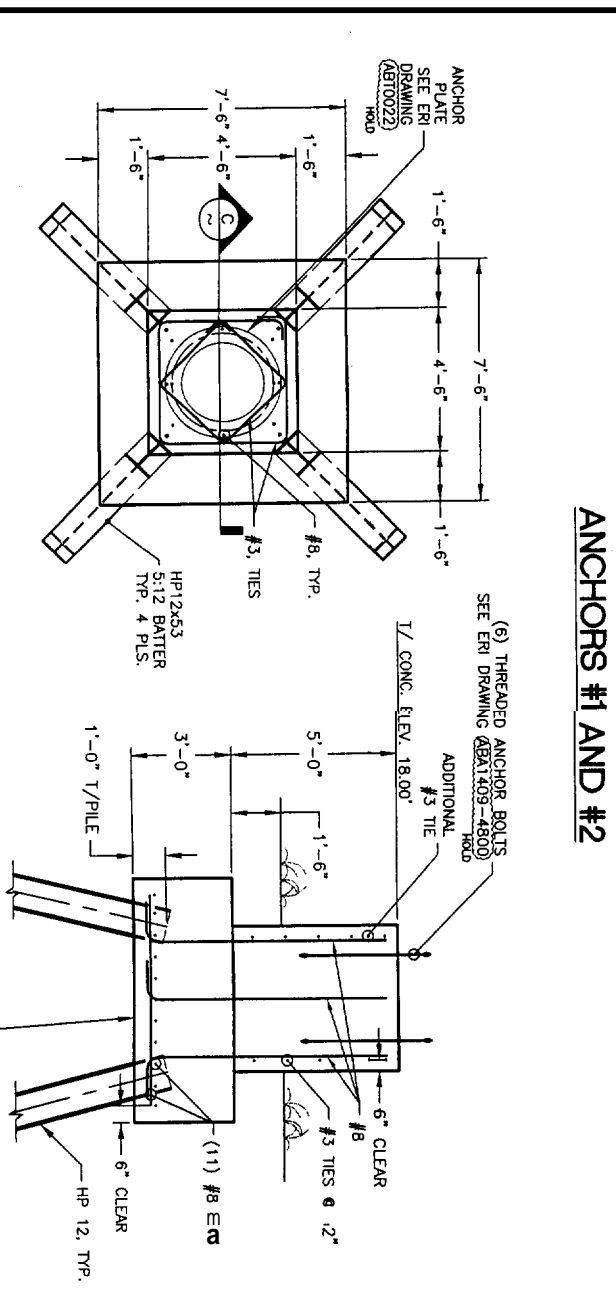
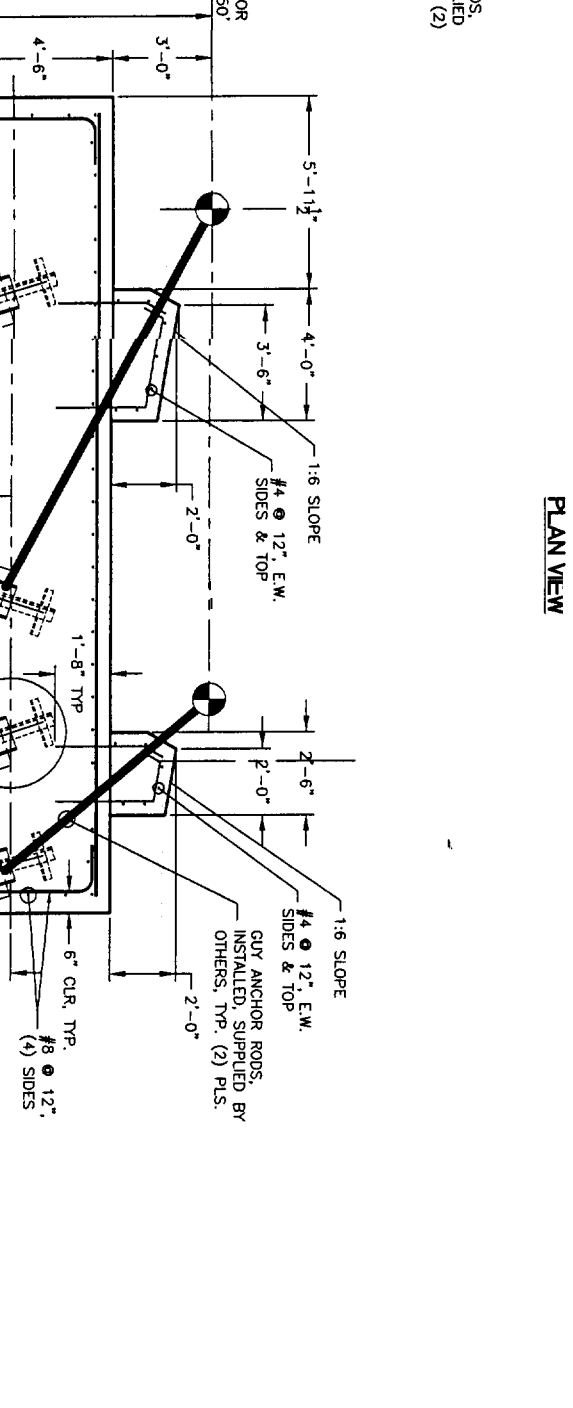
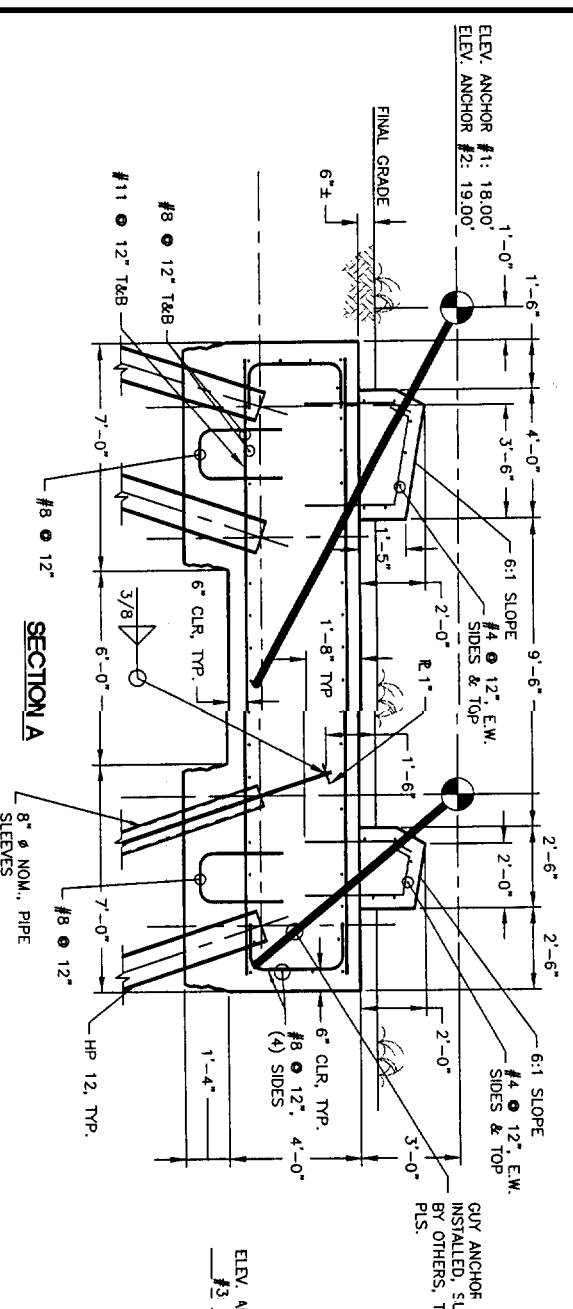
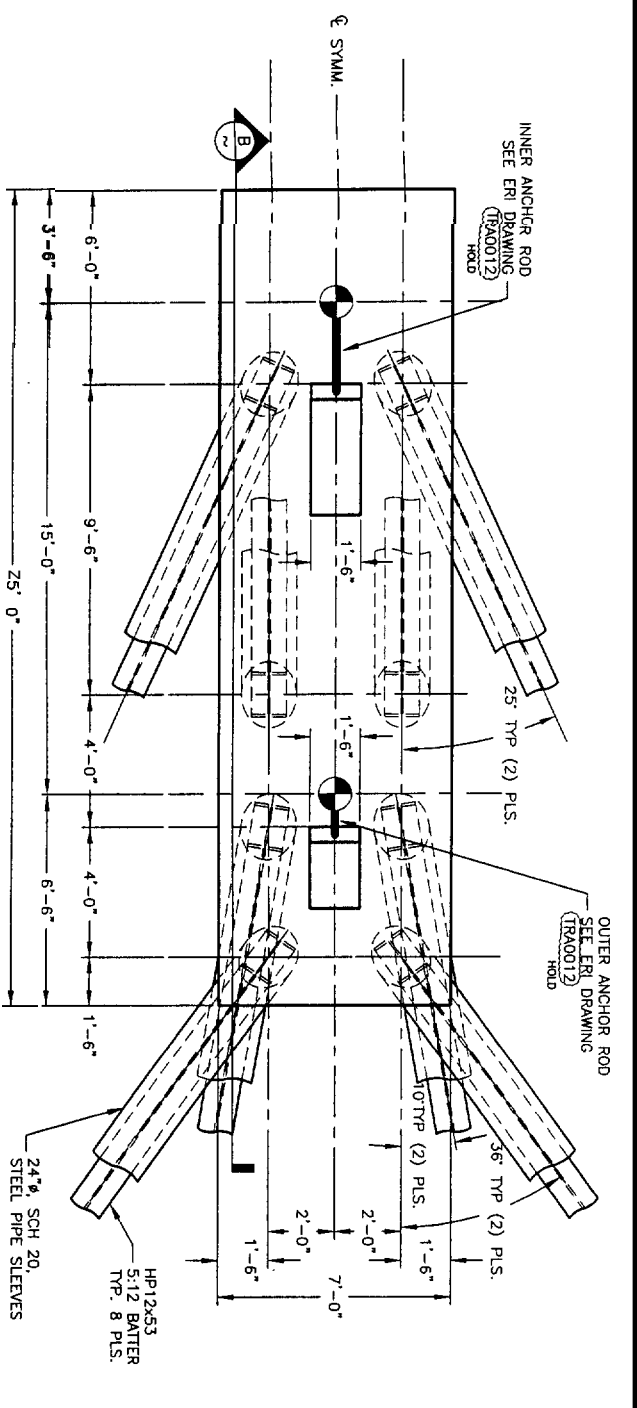
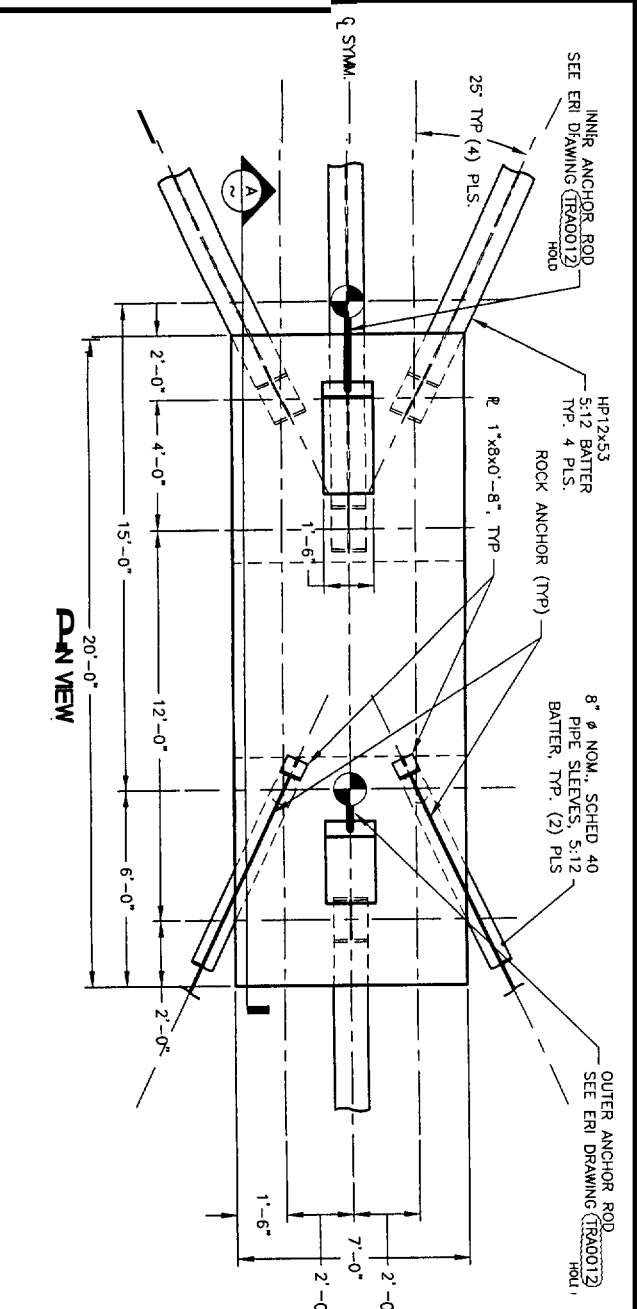
ASSOCIATED DESIGN PARTNERS INC.
 80 Leighton Road Falmouth, Maine 04105
 Office: (207) 878-1751
 Fax: (207) 078-1700
 E-Mail: adp@adpengineering.com

WMGX TOWER PORTLAND, ME
 FOR: PORTLAND RADIO GROUP

SHEET TITLE:
TOWER BASE AND ANCHOR LOCATIONS

REVISIONS		
No.	BY	DATE
1	RCA	6/22/04
2	RCA	10/05/04
3	RCA	10/11/04

DATE: 06-22-04
 SCALE: 1" = 30'
 DESIGN BY: ARLEJOE
 DRAWN BY: BENNETT
 FILE #04053-R-03-C1XX.DWG
 PROJECT NUMBER:
04053
 SHEET NO:
101



ANCHORS #1 AND #2

ANCHOR #3

REVISIONS			
No.	BY	DESCRIPTION	DATE
1	RCA	CLIENT REVIEW	6/22/04
2	RCA	PILE AND FOOTING REVISIONS CONCRETE NOTE REVISION	10/05/04
3	RCA	LONGITUDINAL REINFORCING	10/13/04

PROJECT: **WMGX TOWER**
 PORTLAND, ME
 FOR: PORTLAND RADIO GROUP

SHEET TITLE:
**TOWER BASE
 AND ANCHOR DETAILS**

ASSOCIATED DESIGN PARTNERS INC.

60 Leighton Road, Falmouth, Maine 04105
 Office: (207) 070-1751
 Fax: (207) 070-1700
 E-Mail: adp@adpsengineering.com

DATE: 06-22-04
 SCALE: 3/8" = 1'-0" (IND)
 DESIGN BY: ANNEBOE
 DRAWN BY: BENNETT
 FILE # 04053-PR-R3-C10X06
 PROJECT NUMBER:
04053
 SHEET NO.:
102

DATE: 06-22-04
 SCALE: 3/8" = 1'-0" (IND)
 DESIGN BY: ANNEBOE
 DRAWN BY: BENNETT
 FILE # 04053-PR-R3-C10X06
 PROJECT NUMBER:
04053
 SHEET NO.:
102

DATE: 06-22-04
 SCALE: 3/8" = 1'-0" (IND)
 DESIGN BY: ANNEBOE
 DRAWN BY: BENNETT
 FILE # 04053-PR-R3-C10X06
 PROJECT NUMBER:
04053
 SHEET NO.:
102

GUY DATA CHART

GUY WIRE SIZE	ELEVATION	GUY END PLATE (A-572)	THIMBLE HD/ END FITTING	PREFORM	TURN-BUCKLE	TOWER SHACKLES	ANCHOR	PRIMARY INSULATOR	SECONDARY INSULATOR	GUY WIRE CUT LENGTH	MIN. TENSION LBS
1" EHS	121.0'	10" X 5-3/4" X 1 1/4"	1"	1"	1-1/2"	1-1/4"	1-1/8"	-	-	10,450	10,450
5/8" EHS	241.0'	10" X 4-1/2" X 1"	5/8"	5/8"	1"	7/8"	3/4"	-	-	4,240	4,240
5/8" EHS	241.0'	10" X 4-1/2" X 1"	5/8"	5/8"	1"	7/8"	3/4"	-	-	4,240	4,240
7/8" EHS	361.0'	10" X 4-1/2" X 1"	7/8"	7/8"	1-1/2"	1"	1"	-	-	7,970	7,970
1" EHS	470.0'	10" X 5-3/4" X 1 1/4"	1"	1"	1-1/2"	1-1/4"	1-1/8"	-	-	10,450	10,450

* REFERENCE E-1A FOR ANCHOR RADIUS AND GUY WIRE CUT LENGTH DUE TO DROPS AND RISES IN SURFACE GRADE.

DESIGNED ANTENNA LOADING

ANTENNA TYPE	ELEVATION	LINE
(12) 5' X 1' PCS PANELS	140'	(12) 1-5/8"
(12) 5' X 1' PCS PANELS	160'	(12) 1-5/8"
(12) 5' X 1' PCS PANELS	180'	(12) 1-5/8"
4" GRID	235'	7/8"
4" GRID	260'	7/8"
DRC-C 4 BAY W/RADOMES	280.8'-319.2'	3"
4' X 6' ICE SHIELD	329.2'	-
4" GRID	330'	7/8"
6" GRID	420'	7/8"
(3) DB224 W/LONG ARM MOUNTS	440'	7/8"
SHPX-SAE W/RADOMES	480.6'-522.7'	3"
A-2/3 LIGHT KIT W/SPUR CONDUIT	-	-

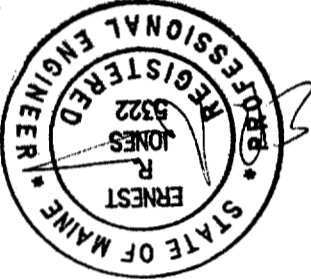
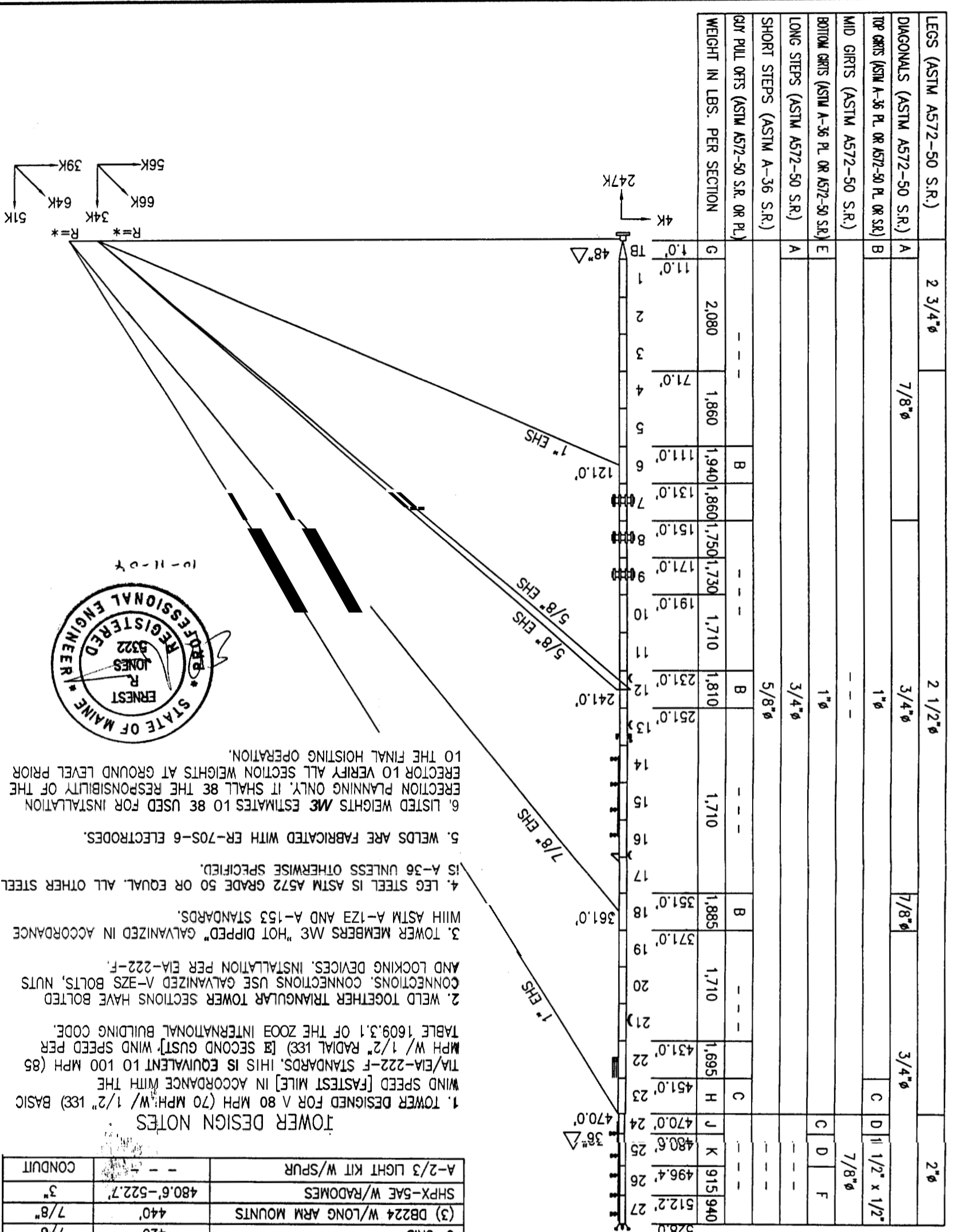
MATERIAL LIST

MARK	SIZE
A	1 1/8" S.R.
B	1 1/4" S.R.
C	12" X 1" PL.
D	7/8" S.R.
E	N/A
F	1 1/2" X 1/2"

WEIGHT LIST

MARK	WEIGHT
G	1,475 LBS.
H	3,100 LBS.
J	1,770 LBS.
K	1,005 LBS.

- TOWER DESIGN NOTES**
- TOWER DESIGNED FOR A 80 MPH (70 MPH W/ 1/2" ICE) BASIC WIND SPEED [FASTEST MILE] IN ACCORDANCE WITH THE TIA/EIA-222-F STANDARDS. THIS IS EQUIVALENT TO 100 MPH (85 MPH W/ 1/2" RADIAL ICE) [SECOND GUST] WIND SPEED PER TABLE 1609.3.1 OF THE 2003 INTERNATIONAL BUILDING CODE.
 - WELD TOGETHER TRIANGULAR TOWER SECTIONS HAVE BOLTED CONNECTIONS. CONNECTIONS USE GALVANIZED V-ZS BOLTS, NUTS AND LOCKING DEVICES. INSTALLATION PER EIA-222-F.
 - TOWER MEMBERS W/ "HOT DIPPED" GALVANIZED IN ACCORDANCE WITH ASTM A-123 AND A-153 STANDARDS.
 - LEG STEEL IS ASTM A572 GRADE 50 OR EQUAL. ALL OTHER STEEL IS A-36 UNLESS OTHERWISE SPECIFIED.
 - WELDS ARE FABRICATED WITH ER-70S-6 ELECTRODES.
 - LISTED WEIGHTS ARE ESTIMATES TO BE USED FOR INSTALLATION ERECTION PLANNING ONLY. IT SHALL BE THE RESPONSIBILITY OF THE ERECTOR TO VERIFY ALL SECTION WEIGHTS AT GROUND LEVEL PRIOR TO THE FINAL HOISTING OPERATION.



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 FAX: (812) 925-4028

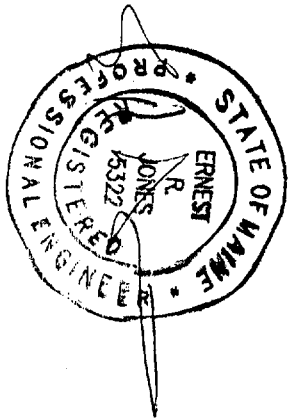
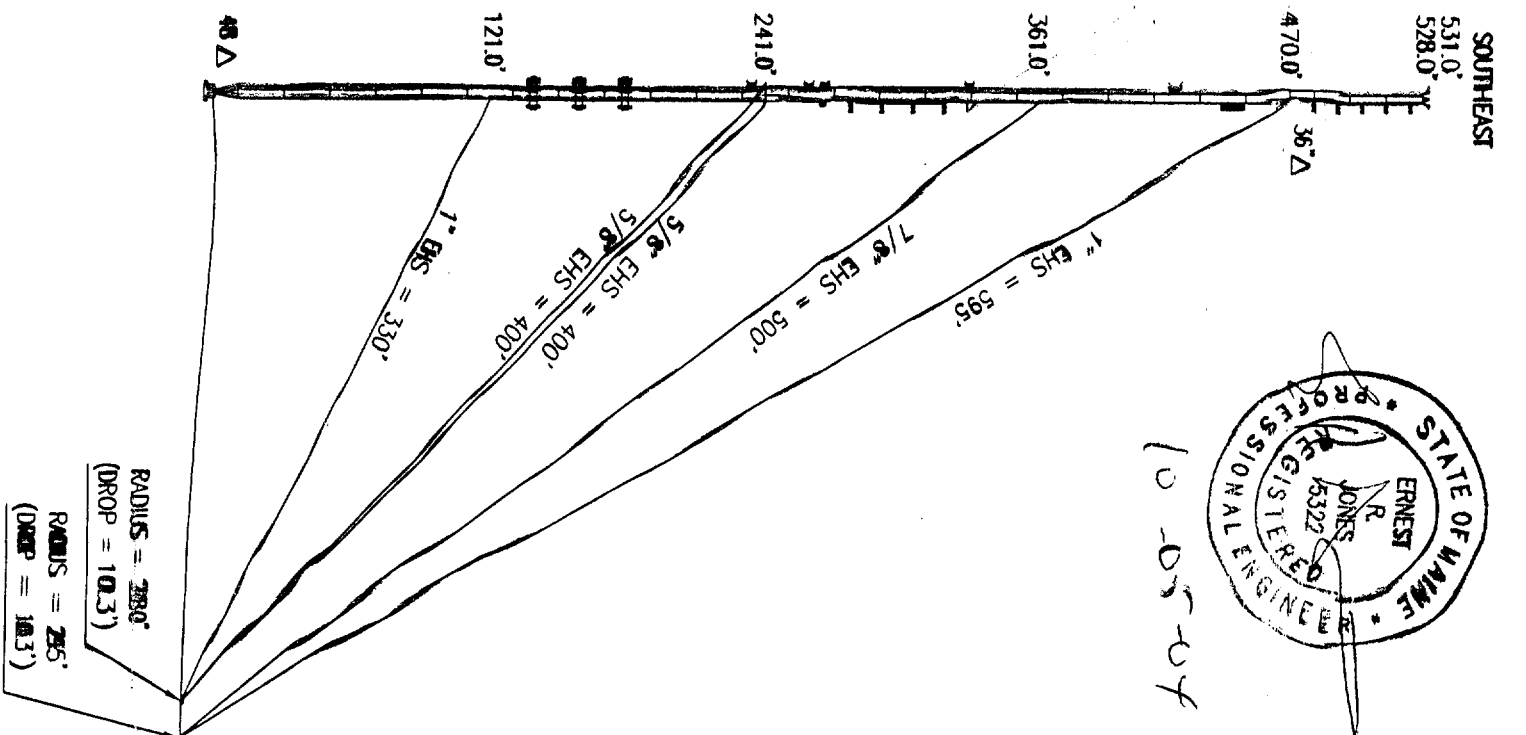
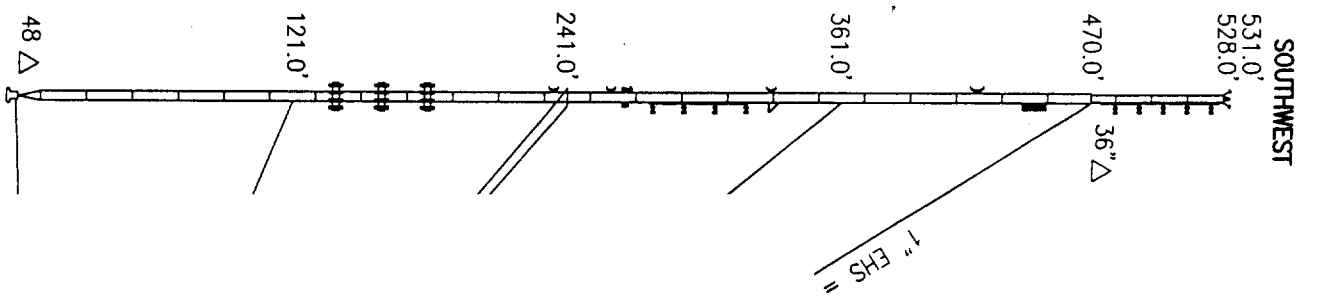
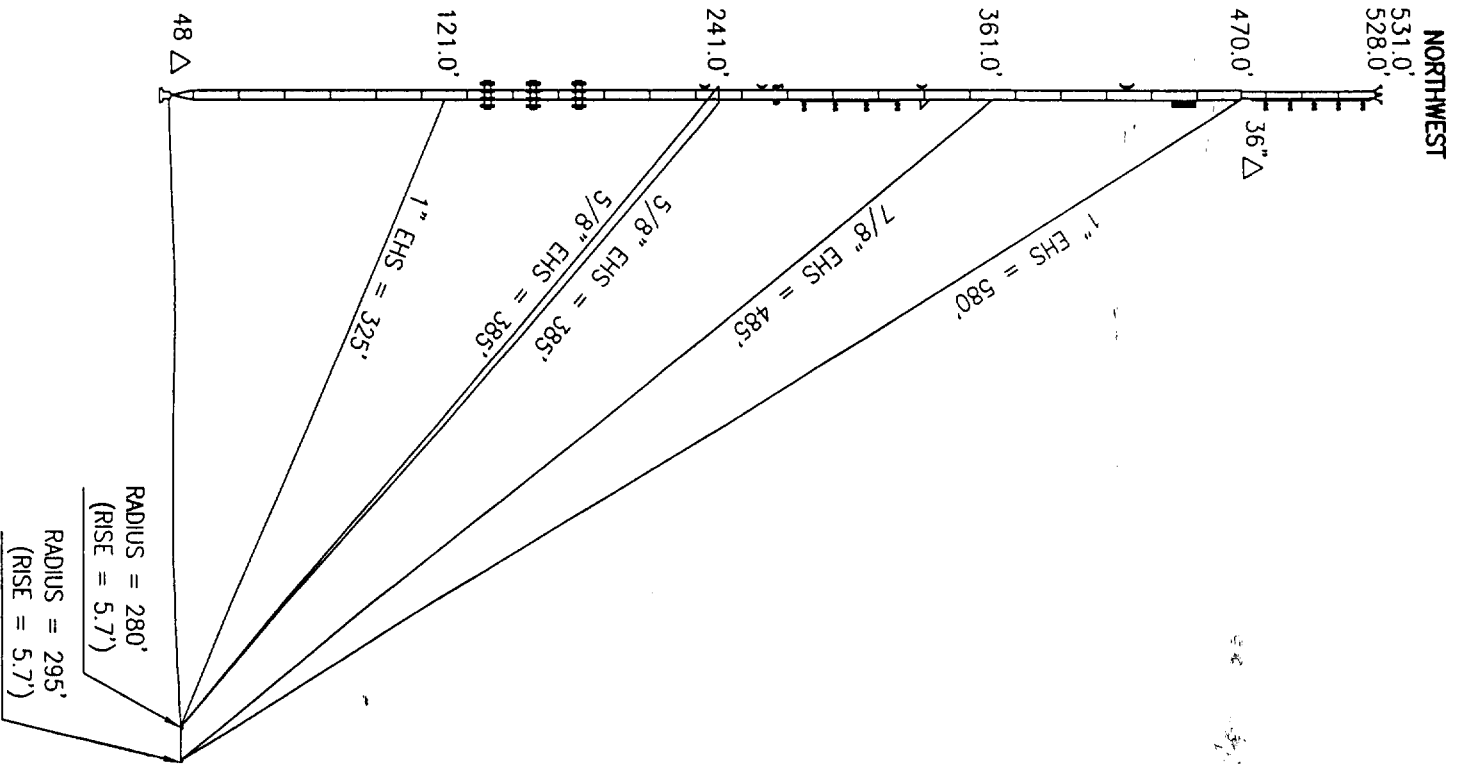
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NO	REVISION	AP'D	DATE
1	ISSUED FOR CONSTRUCTION	TW	10-12-04
2			
3			
4			
5			
6			

TOWER ELEVATION

NAME	FOR	DATE
PORTLAND, ME	G:\DRAWING\VAL\PROJECTS\12590	08/24/04
	SCALE	DATE
	SCALE	DATE
	SCALE	DATE

DATE: 08/24/04
 SCALE: 1/2" = 1'-0"
 DRAWING NO.: E-1



10-05-07

ELECTRONICS RESEARCH, INC.
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NO	REVISIONS	BY	DATE	NAME	FOR	DATE	NO.
1							1
2							2
3							3
4							4
5							5

NAME: **OUR WIRE TOWERING & CUT LENGTHS**
 FOR: **POWERLINE**
 DATE: 08/26/04
 DRAWING NO.: E-1A
 SHEET NO.: E-1A